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**Federal Aviation
Administration**

Aviation Maintenance Alerts

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Improve Reliability-Interchange Service Experience

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

AERO COMMANDER

Aero Commander; Model 112; Landing Gear Hardware Wear; ATA 3213

While completing a scheduled inspection, the technician removed the left and right main landing gear forward trunnion bolts for a precautionary inspection.

The bolts (P/N AN4-23A) were bent, distorted, and severely worn. The submitter cautions all maintenance personnel to periodically check these bolts and replace them, if necessary. The submitter suggested the manufacturer establish a 5-year or 500-landings "life limit" for replacement of these bolts.

Part total time-1,950 hours.

Aero Commander; Model 114B; Engine Exhaust Chafing; ATA 7810

During an annual inspection, the technician noticed an engine exhaust stack was chafing on an engine mount.

The exhaust stack (P/N 9910758-101) chafed the engine mount (P/N 625000-501) tube which connects the right lower engine mount bracket at the firewall to the right nose gear trunnion mount. The tube was worn to a depth of .035 inch.

An exhaust stack clamp (P/N QS200M64S) was missing; however, the spring and bracket for the clamp were intact. The submitter suspects the clamp loosened and departed the aircraft. Engine exhaust system security is critical and should be checked closely at every opportunity.

Part total time-298 hours.

BEECH

Beech; Model A36; Bonanza; Flight Control Column Discrepancy; ATA 2701

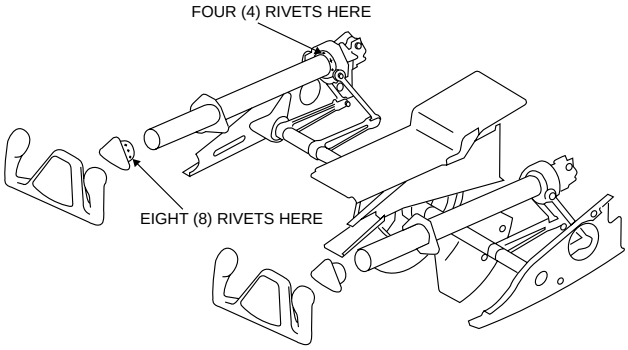
During a scheduled inspection, the technician noticed the pilot's control column "felt sloppy."

Investigating further, the technician found the rivets, used to secure the forward collar to the control yoke tube, were severely worn and working. (Refer to the following illustration.) As depicted, there are four rivets (P/N MS2047AD5) used for the forward collar and eight rivets for the aft collar. The technician questioned the logic of using eight rivets on the aft control yoke tube and only four rivets on the forward collar. He replaced the defective rivets with rivets that are one size larger (P/N MS20470AD6) to obtain a

proper fit. Failure of these fasteners could completely disable the aileron and elevator flight control systems and create a very serious hazard to flight safety.

The submitter contacted the manufacturer who advised him the four rivets on the forward collar were sufficient to secure the forward collar. This report, along with supporting information, was forwarded to the responsible FAA Aircraft Certification Office for appropriate action.

Part total time-2,300 hours.



Beech; Model 58P; Defective Oxygen Bottle Security; ATA 7205

While conducting other maintenance, the technician discovered the 15 cubic foot oxygen bottle, mounted to a shelf in the empennage, was not secure.

The oxygen bottle is normally secured by two metal bands routed through the mount brackets. The forward bracket was broken, and the aft bracket had one of its two legs broken, leaving one leg as the sole support for the oxygen bottle.

An unsecured oxygen bottle creates a very hazardous situation, not only from the possibility of interference with aircraft systems, but also from the possible sudden release of oxygen pressure projecting the bottle as a missile.

Part total time not reported.

Beech; Model BE 65-A90; King Air; Defective Elevator Trim System; ATA 2731

The flightcrew reported severe vibration, which seemed to come from the empennage, during a descent for landing. The pilot landed the aircraft safely.

Maintenance personnel investigated and found a bolt and bushing missing from the right elevator trim tab horn. The elevator electric trim servo lower bearing was displaced from the housing; therefore, the servo drum and shaft wobbled during rotation. Also, the trim cable was tangled around the servo drum. The submitter could not identify the sequence of events which led to these discrepancies.

Part total time-1,452 hours.

Beech; Model 65-90; King Air; Defective Cabin Heater; ATA 2140

The pilot reported the cabin heater operated only on the ground or when the landing gear was extended in flight.

Maintenance personnel discovered the heater (Janitrol, model A10D40) combustion liner had several cracks. The combustion air safety switch tested within limits but did not function properly every time. The combustion liner cracks present the possibility of carbon monoxide being introduced into the cockpit/cabin and a serious degradation of safety. This unit is not covered by an Airworthiness Directive which would require a periodic pressure-decay test.

The submitter suggested that a pressure-decay test be made mandatory and be accomplished at frequent intervals.

Part total time not reported.

Beech; Model 76; Duchess; Nose Landing Gear Door Structure Discrepancy; ATA 5280

During a scheduled inspection, the technician discovered the nose landing gear door linkage channel (P/N 105-410000-57) and channel support (P/N 105-410000-199) were cracked and moved out of position.

Even a small change in the position of these parts may cause a change in the gear door rigging or the nose gear may be jammed in the "up" position. The submitter speculated hydraulic force, from the actuator attempting to lower the nose gear, broke the channel loose from the structure before the gear extended.

The submitter recommended this area receive close scrutiny during inspections. Technicians should carefully follow the manufacturer's maintenance manual procedures during rigging, and should give attention to the inside of the door fork where the actuating pin rides. Excessive wear in the pin area allows the doors to be out of rig and jam the nose gear in the "up" position. If the channel and/or channel support are cracked, it is impossible to maintain proper rigging.

Part total time not reported.

Beech; Model 99; Airliner; Defective Nose Landing Gear Door Actuator; ATA 3230

While removing the nose landing gear drag brace for overhaul, the technician noticed the gear door actuator tube assembly would not mount flush with the drag brace.

Further investigation revealed longitudinal cracks on the drag brace assembly (P/N 115-820034-13). Other than age, the submitter was not able to determine the cause of this defect. After replacing the necessary part and adjusting the gear door rigging, the inspector approved the aircraft for return to service.

Part had operated 5,000 total cycles.

Beech; Model 99; Airliner; Deicer Boot Deterioration; ATA 3010

During a scheduled inspection, the technician noticed the vertical fin deicer boot was deteriorated.

The deicer boot had numerous patches and surface "weather checking" cracks between the patches. The surface cracks may allow moisture to travel under the patches causing them to fail. The age of the boot and the operating environment are believed to be contributing factors to the accelerated deterioration. The technician replaced the deicer boot and approved the aircraft for return to service. We recommend close attention to deicer boot condition during inspections.

Part total time not reported.

Beech; Model A200C; King Air; Defective Firewall Fuel Shutoff Valve; ATA 2823

The aircraft was brought to a maintenance facility with a report of erratic annunciator indications for the number one engine firewall shutoff valve.

During an investigation, the technician found the shutoff valve switch (P/N 101-320135-1) housing was broken. It was evident someone previously removed the switch and when it was reinstalled, they used a longer screw. The extra screw length allowed the shank end to penetrate the switch housing resulting in debris which caused intermittent and erratic annunciator indications. Using the proper hardware would have prevented this discrepancy!

Part total time not reported.

Beech; Model B200; King Air; Windshield Failure; ATA 5610

While flying at 27,000 feet, the inner pane of the copilot's windshield broke. The outer windshield surface remained intact, and the flightcrew followed emergency procedures culminating in a safe landing.

The technician replaced the windshield (P/N 101-384025-16) and approved the aircraft for return to service. Other than "old age" and possibly a high number of cycles, the maintenance technician could not find a cause for this failure. Complete failure of the windshield could result in loss of aircraft control. Therefore, this unit deserves close attention during inspections and maintenance.

Part total time-1,644 hours.

Beech; Model 400A; Beechjet; Cabin Door Discrepancy; ATA 5210

During a scheduled inspection, the technician discovered the cabin door hinge washers were out of alignment and could be rotated by hand.

Further investigation revealed the safety wire and "torque seal" were broken on both bolts (P/N NAS1305-34H). These bolts, used to secure the cabin door hinge, were loose and backing out of the nuts. This defect could result in a serious ground or flight accident. This area deserves close attention at every opportunity.

Part total time-2,660 hours.

CESSNA

Cessna; Model 150G; Landing Gear Failure; ATA 3230

The pilot reported the right main landing gear collapsed during landing.

A maintenance technician discovered the gear failed due to corrosion under the entry step attachment. The submitter recommended periodically removing and inspecting the main landing gear entry step installations and the gear spring assemblies.

Part total time-6,544 hours.

Cessna; Model 170; Defective Wing Flap Cable; ATA 2750

During an annual inspection, the inspector discovered a damaged right wing flap cable.

The flap cable (P/N 0510105-6) was severely frayed approximately .5 inch from the clevis fitting attachment. The submitter believed the damage was the result of wind moving the flap and flexing the cable at the damaged area. Since this aircraft was manufactured in 1948, age was most certainly a factor.

Part total time-4,117 hours.

Cessna; Model 182S; Skylane; Engine Oil Loss; ATA 7931

After completing a 20 minute flight, the pilot noticed engine oil saturated the lower fuselage. Approximately 7.5 quarts of oil was lost from the total supply of 9 quarts. Since the oil traveled down, the pilot did not realize he was losing oil.

A maintenance technician discovered the engine oil pressure switch (P/N 77041) was broken where the plastic housing is mounted on the engine.

This report is dated February 9, 2000, which is prior to the issuance of Airworthiness Directive (AD) 2000-04-01, dated March 11, 2000. AD 2000-04-01 references Cessna Service Bulletin (SB) 00-79-01 and requires replacement of the oil pressure switch (P/N 77041) with an improved part (P/N 83278). The improved part is designed to prevent breakage and engine oil loss.

Part total time-1,005 hours.

Cessna; Model A185F; Skywagon; Main Landing Gear Cracks; ATA 3211

This aircraft is equipped with amphibious floats using "Gar Aero" wheels.

While conducting an annual inspection, the technician discovered a crack on a fitting attached to the left main landing gear. The crack was located where the leading and trailing edges of the gear leg ride in the bracket (P/N 0713493-61). The technician found the crack visually. He used the dye-penetrant inspection method to detect cracks on the right gear bracket (P/N 0713495-64).

The submitter suggested operators of like equipped aircraft remove the main landing gear system each 500 to 1,000 hours of operation for a thorough inspection of the brackets.

Part total time is unknown.

Cessna; Model U206G; Stationair; Engine Compartment Fuel Leak; ATA 2820

During an annual inspection, the inspector discovered an engine compartment fuel supply hose leaking profusely.

When the technician turned on the electric fuel boost pump fuel leaked from the braided, crimped area of the hose (P/N S1236C3-0350) near the end.

The submitter did not give the age of the fuel hose. Airworthiness Directive (AD) 71-24-04 covers the subject of fuel hose leakage; however, it does not apply to this particular aircraft. AD 71-24-04 references Cessna Service Letter (SL) 71-7, Supplement 1, dated November 3, 1971, which applies to "All single-engine aircraft equipped with flexible fluid hoses." The submitter suggested the FAA consider revising AD 71-24-04 to include other aircraft that are vulnerable to this defect.

Part total time is unknown.

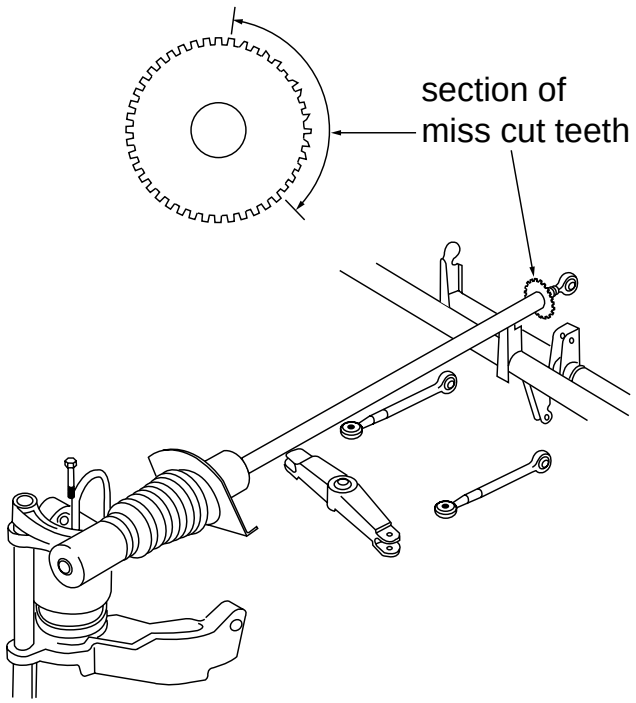
Cessna; Model 207A; Stationair; Defective Nose Gear Steering Part; ATA 2721

After the technician installed a new nose gear steering bungee assembly sprocket (P/N 1260632-3), the drive chain came off during an operational test.

The technician reinstalled the chain and conducted another test while observing the chain travel on the sprocket gear. The chain rode normally for approximately two-thirds of a revolution then began riding up on the top of the sprocket teeth and disengaged from the sprocket. After removing the sprocket and conducting a close inspection, the technician found some of the sprocket teeth were not symmetrical and were cut differently from the others. (Refer to the following illustration.)

If this situation happened once, it may happen again. There could be other nonstandard parts in the distribution system. A thorough receiving inspection on all parts is the best remedy.

Part total time-0 hours.

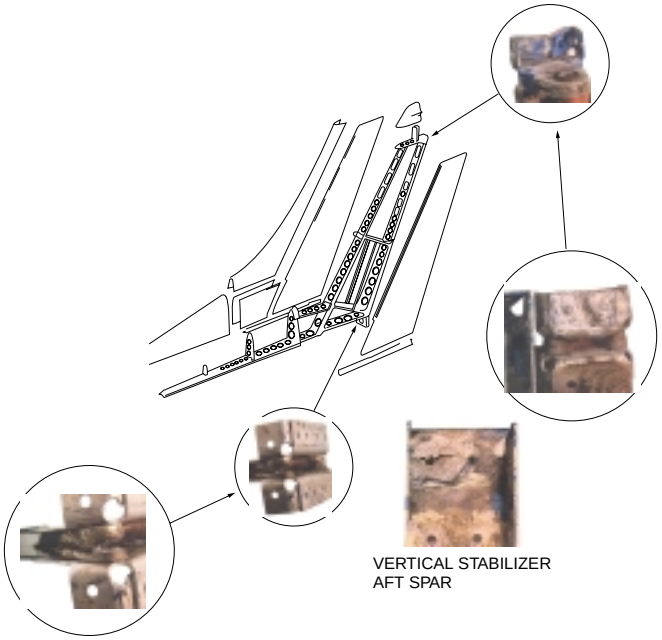


Cessna; Model 210M; Centurion; Defective Rudder Attachment Points; ATA 5541

During an annual inspection, the technician discovered severe corrosion on the upper rudder attachments (P/N 1231023-3) and the lower rudder attachments (P/N 1231023-1). (Refer to the following illustration.) The aft vertical stabilizer spar was also severely damaged at the points where the rudder hinge brackets are attached.

With this amount of damage, complete loss of rudder could occur at any time.

Part total time-4,193 hours.



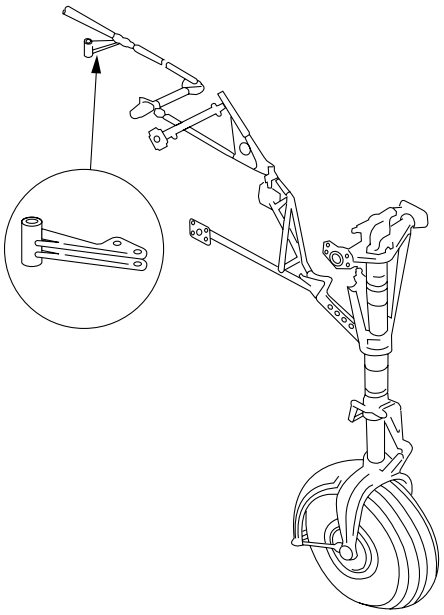
Cessna; Model 310P; Nose Landing Gear Failure; ATA 3230

The pilot retracted the landing gear and heard a loud bang. The noise seemed to come from under his feet. All attempts to lower the nose landing gear failed, and the pilot landed the aircraft with only the two main landing gears fully extended.

A maintenance technician investigated and discovered a broken nose gear idler bellcrank (P/N 0842102-2). (Refer to the following illustration.) Failure of the idler bellcrank effectively disconnected the nose gear linkage and did not allow the gear to extend normally.

The submitter recommended that technicians remove the bellcrank every 500 hours. After the bellcrank is removed, use an appropriate nondestructive-testing method to determine serviceability.

Part total time-3,315 hours.



Cessna; Model 310R; Inoperative Cabin Heater; ATA 2140

After a flight, the pilot reported the cabin heater would not operate.

A technician discovered the fuel pump (P/N 721526) was operating; however, it sprayed fuel from the pump shaft rather than supplying fuel to the heater.

The submitter stated this fuel pump was in service for only a short time. He did not give a cause for this failure.

Part total time-2 hours.

Cessna; Model 425; Conquest; Horizontal Stabilizer Attachment; ATA 5510

While conducting a scheduled inspection, the technician discovered that a nut was split. The nut retains the left horizontal stabilizer front spar attachment bolt.

The nut (P/N NAS1291-8) was split on one side from top to bottom. This nut is the subject of Airworthiness Directive (AD) 85-25-11 which references Cessna Service Bulletin (SB) 85-25, Revision 1. It appeared this was a "new" type nut which was changed some time ago in compliance with the AD 85-25-11.

The findings of this report give credence to the importance of continued inspections, even when AD requirements are satisfied. In this case, after installation of the "new" type nut, AD 85-25-11 did not require further inspections. All maintenance personnel are urged to be as conscientious as the submitter of this report in expending the extra effort to eliminate an unsafe condition.

Part total time-608 hours.

DASSAULT

Dassault; Model 10; Falcon; Defective Nose Landing Gear Door System; ATA 5280

The pilot reported that on several occasions, he heard a "thumping" noise coming from the nose landing gear area when the gear was retracted.

A maintenance technician investigated, and discovered the center right nose gear door bellcrank was broken. No other defects were found in the nose gear and wheel well area. The submitter speculated that age and high cycles of this part contributed to metal fatigue and resulted in failure. It was suggested that close attention be given this part during inspections and maintenance.

Part total time-7,408 hours.

NAVION

Navion; All Models; Aileron Cable Defects; ATA 2700

The information for this article was submitted by Mr. Nick Miller of the FAA, Aircraft Certification Office (ACE-116C), located in Chicago, Illinois. Mr. Miller obtained the information from Mr. Marlow Skinner who is a long time Navion mechanic. The information was confirmed by Mr. Paul Everly who is

employed by the current Navion Type Certificate Holder, and Mr. Ronald Judy of the American Navion Society.

During an annual inspection, the submitter found the aileron control cables corroded and deteriorated.

The area of damage was located in the first rib bay outboard of the wheel well. One cable had only two strands holding it together. The exposed ends of the cables, in the wheel well and at the aileron bellcrank, appeared normal and serviceable. Cable damage may be found by following the inspection procedures described below.

Inspection of the aileron cables during each annual inspection should include lowering the flaps, and disconnecting the flap control rod bolt, allowing the flaps to hang down 90 degrees. The aileron control cables can then be inspected through the wing trailing edge lightening holes after removing the lightening hole covers or gap seals, if installed. The entire length of the control cables should be checked visually and physically for evidence of corrosion or damage (broken strands, etc.). If the cable integrity is still in doubt, the cables should be disconnected from the bellcrank and pulled into the wheel well for further inspection. Before disconnecting the cables, it would be wise to make a drawing of the cable routing to reduce the chance of misrouting the cables during reinstallation.

Aileron cable routing over the two pulleys outboard of the wheel well make it easy to cross the cables during installation. Attaching a guide wire, cable, cord, or other device to the cable end prior to removal should insure proper routing over the pulleys during reinstallation. Also, it would be wise to note which hole on the bellcrank connects to which cable turnbuckle fork. Checking for correct flight control operation after installation should eliminate errors.

Also, maintenance personnel should check for jammed or frozen aileron cable pulleys, especially the ones just outboard of the wheel well. If the pulley does not turn, the action of the cable passing over it will likely damage the cable and/or pulley.

Two other reports were received concerning corroded elevator control cables in the cabin under the rear passenger seat. This area, also containing the rudder cables and the aileron interconnect cables, is vulnerable to contamination with dirt, FOD, and moisture accumulations, especially when an auxiliary fuel tank is installed under the rear seat. If the aircraft does not have an underseat fuel tank, these cables can be inspected by removing the panel under the front edge of the rear seat to access the cables. Also, this will provide inspection access for the pulleys and internal structure. For aircraft with a fuel tank installed under the rear seat, access to cables and pulleys may be obtained by inspecting from underneath the baggage compartment after removing either the inspection plates in the aft wing filet fairing or by removing the fairing itself. On aircraft with the after-market “McKenna” fairings, when the lower half of the fairing is removed to inspect the flap linkage and actuating cylinder, the cables and pulleys will be readily visible.

The elevator trim tab cables (enclosed in a “Bowden Cable” type housing) should be inspected at the exposed ends with the trim adjusted both full up and full down. If there is any indication of damage, all four cables should be replaced.

By using proper inspection techniques and procedures, all of the flight control system cables can be inspected. The importance of a complete inspection cannot be over emphasized. Since these aircraft were manufactured between 1946 and 1976, their age alone should dictate a more thorough and searching inspection in all areas.

Aircraft age between 24 and 54 years.

PIPER

Piper; Model PA23-250; Aztec; Electrical System Failure; ATA 2432

While preparing for an annual inspection, the technician was unable to apply battery electrical power to the aircraft.

After finding corrosion products in the area of the battery contactor (Cutler Hammer P/N AN3370-1), the technician disassembled the unit. The interior of the battery contactor was consumed by corrosion causing total failure of the electrical system.

The submitter speculated the following items may have contributed to this damage: corrosion (propagated by moisture and other contaminates) entering the unit, loose or worn electrical contacts, and the extended period of time the aircraft remained in the hangar.

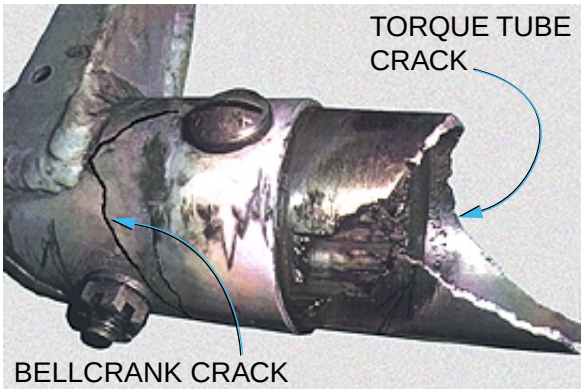
Part total time-1,795 hours.

Piper; Model PA23-250; Aztec; Asymmetrical Wing Flaps; ATA 2750

The pilot reported that he noticed a slight asymmetrical wing flap position during a training flight.

An investigation by maintenance personnel disclosed the wing flap torque tube (P/N 17634-00) was cracked around approximately 80 percent of its diameter. (Refer to the following illustration.) The crack was located adjacent to the left bellcrank, and the bellcrank was severely cracked. The submitter speculated this defect may have been caused by age (many years of operation) and extending the wing flaps at excessive airspeeds. He speculated the crack began as a small defect, and over time, migrated to the brink of complete failure. Maintenance personnel should be alert for this type defect, especially on older, high-time aircraft.

Part total time-11,000 hours.



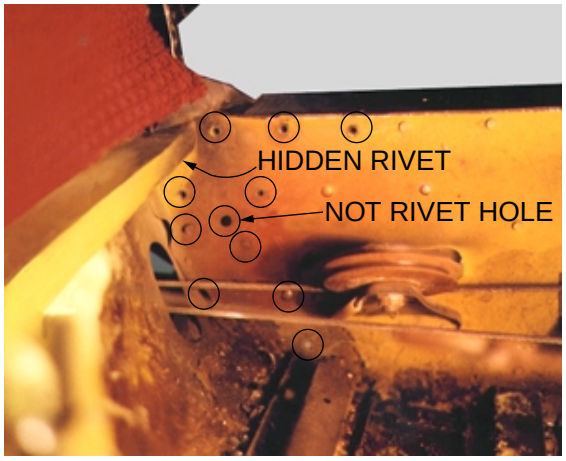
Piper; Model PA24-250; Comanche; Wing Attachment Fasteners Broken; ATA 5341

While installing avionics equipment, the technician discovered several broken fasteners in a wing attachment fitting.

Twelve rivets were broken and missing from the right rear wing attachment fitting (P/N 23663-00) at fuselage station 136. (Refer to the following illustration.) Further inspection revealed the technician could move the right wing trailing edge up and down using hand pressure. He checked the other three wing attachment fittings and found them in good condition.

The submitter speculated this defect was caused by hard landings. The maintenance records indicated this aircraft was involved in two previous accidents, and it is possible damage went undetected during repairs. The FAA Service Difficulty Reporting (SDR) program data base contains two additional entries of similar failures. This aircraft was in imminent danger of in-flight wing separation.

Part total time-3,017 hours.



Piper; Model PA28R-200; Arrow; Amp Meter Failure; ATA 2437

After a flight, the pilot reported the electrical system amp meter was not operating.

A test by a maintenance technician confirmed the problem, and he removed the amp meter. He discovered one of the amp meter posts was shorted to the mounting bracket. The mounting bracket suffered severe heat damage and melting as a result of the electrical short circuit. The technician installed a new amp meter in accordance with Piper Service Bulletin (SB) 811A and Piper kit number 765-186V. This defect creates the possibility of an in-flight fire and a very hazardous condition. We urge all operators to comply with SB 811A at the earliest opportunity.

Part total time not reported.

Piper; Model PA30; Twin Comanche; Fuel Odor in the Cockpit; ATA 2140

The flightcrew reported a strong fuel odor in the cockpit during flight.

During an investigation, the technician discovered the heater fuel shutoff valve (P/N 764-340) was leaking. The fuel traveled down the forward bulkhead in the nose section then aft into the landing gear transmission compartment.

The submitter speculated “poor valve design” led to this defect. He stated that the “O-ring” seal is expected to hold back 26 pounds of fuel pressure when the valve is open. He reported the fuel valve has been the source of previous fuel leak problems on other aircraft.

Part total time-850 hours.

Piper; Model PA31-350; Chieftain; Loose Fasteners; ATA 5510

During a scheduled inspection, the technician discovered “smoking” (loose) rivets on the horizontal stabilizer.

The defective fasteners were located at the left outboard elevator hinge point. After removing the elevator, the technician found the outboard hinge assembly (P/N 71700-2) was cracked vertically approximately .25 inch. The submitter did not offer a cause for this defect.

Part total time-3,755 hours.

Piper; Model PA34-200; Seneca; Pitch Control Problem; ATA 2740

The pilot reported the aircraft began to porpoise (pitch noseup and nosedown) without command during flight. The flightcrew made a safe landing and delivered the aircraft to maintenance.

While investigating this problem, the technician found an elevator trim cable (P/N 62701-097) broken at fuselage station 187.84. At this location, the cable passes through a bulkhead where he found evidence of chafing. He had to slightly elongate the bulkhead hole, after installing a new cable, to provide adequate clearance and to prevent further chafing. This area warrants your full attention during inspections and maintenance.

Part total time-4,837 hours.

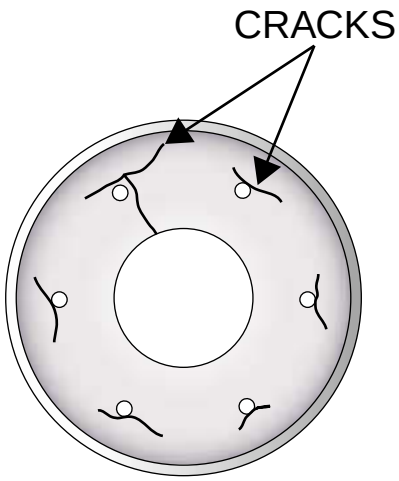
Piper; Model PA34-220T; Seneca; Propeller Spinner Bulkhead Cracks; ATA 6113

During a scheduled inspection, the technician found cracks in the propeller spinner bulkhead.

The cracks were located at or adjacent to each of the attachment bolt holes. (Refer to the following illustration.) There were no dynamic balance weights attached to the bulkhead.

The submitter suggested the manufacturer redesign the spinner bulkhead using heavier metal to prevent this type of defect.

Part total time-288 hours.



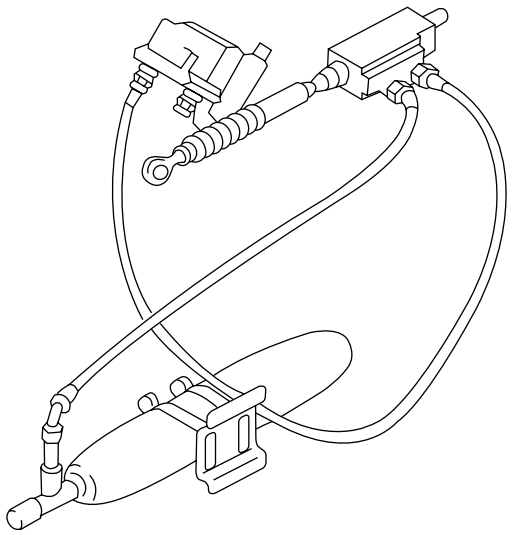
Piper; Model PA42-720; Cheyenne; Defective Landing Gear Uplock Release Actuators; ATA 3230

While the aircraft was in the hangar for maintenance, a technician changed the nose landing gear uplock emergency release actuator due to leakage.

The actuator (P/N 551-968) was leaking where the rod enters the housing. (Refer to the following illustration.) The technician installed a new actuator, bearing the same part number. The new actuator leaked from the end cap during an operational test. He installed two other actuators, and they both leaked at the end cap. After installing the fourth new actuator, an operational test was satisfactory.

The submitter speculated the defective actuators were the result of a manufacturing problem.

Part total time not applicable.



Piper; Model PA44-180; Seminole; Flight Control Skin Crack; ATA 5751

During a scheduled inspection, the inspector discovered a crack in the aileron skin.

The right aileron inboard skin panel (P/N 86562-25) was cracked on the top side near the aft edge and 12 inches from the inboard end. This is a new aileron as called for in Piper Service Bulletin 1016. All maintenance personnel should be aware that even new parts can have defects and close inspection is advised.

Part total time-438 hours.

UNIVAIR

Univair (Ercoupe); Model 415C; Fire Damage; ATA 2430

This aircraft was the subject of an incident involving a fire, which occurred during ground operations.

During an investigation, the inspector determined that failure of an electrical wire led to development of a fire. The wire was routed under the forward fuel tank and a short circuit developed because the wire insulation deteriorated leaving the conductor exposed. Age was given as the cause for deterioration of the wire insulation. The extent of aircraft damage was not given.

Part total time not reported.

HELICOPTERS

BELL

Bell; Model 206B; Jet Ranger; Cabin Structural Defect; ATA 5311

While complying with the inspection requirements of a scheduled inspection, the technician found severe structural corrosion.

Corrosion penetrated more than 25 percent of the attachment fitting (P/N 206-031-200-033) structure. The fitting is located in the aft overhead cabin structure in an area that is enclosed and filled with insulation. The submitter speculated the insulation material collected and retained moisture which resulted in the corrosion damage.

Part total time-5,199 hours.

EUROCOPTER

Eurocopter; Model EC-120B; Colibria; Engine Failure; ATA 7321

During flight, the pilot experienced an engine failure which resulted in an emergency landing.

After the operator and a factory representative conducted an inspection, they discovered a piece of black rubber material (8mm by 18mm in size) lodged in the ejector pump. They determined the rubber caused the engine failure.

The submitter speculated the rubber restricted the high-pressure fuel pump and it shut off or severely limited the engine fuel supply. He recommended the manufacturer design an airframe-mounted fuel filter and locate it upstream of the low pressure unit.

Part total time not reported.

MCDONNELL DOUGLAS

McDonnell Douglas; Model 369HS; Engine Oil Leak; ATA 7900

This helicopter engine (Allison Model 250-C20) had been modified by installing an external engine oil filter in accordance with Supplemental Type Certificate (STC) SR00103SE.

After taking off from a ship, the overwater flight proceeded for approximately 12 minutes before the pilot noticed the engine oil pressure indicator began to fluctuate.

The flightcrew immediately returned to the ship for landing. The oil pressure indication became more erratic, fluctuating between the green and yellow indicator marks. As the helicopter approached the ship, the oil pressure was fluctuating in the yellow band. When the landing was made, the oil pressure dropped below the yellow band. Immediately after landing, the engine oil chip light

illuminated. During this sequence of events, the flightcrew did not notice a rise in engine oil temperature or turbine outlet temperature.

Engine oil covered the back of the helicopter and the flight deck. The technician discovered the leaking engine oil originated from the external engine oil filter housing. A nylon insert for the temperature probe on the back of the filter housing failed. The submitter stated this is the second like occurrence on this helicopter.

The technician checked the upper chip detector and found three flakes of dark-colored metal which appeared to be from a turbine bearing. After replenishing the engine oil system, he motored the engine using the starter and detected a "metallic rubbing" sound from inside the engine. He removed the engine and sent it to a shop to be overhauled and inspected. The results of the investigation were not available when this report was submitted.

Part total time-1,000 hours.

GLIDERS

GROB

Grob; Model G102; Astir CS; Wing Balance; ATA 5720

During flight, the pilot experienced a wing-imbalance condition and successfully terminated the flight.

Investigators discovered a 2.6 pound piece of lead loose inside the left wing. The lead rested against the left aileron bellcrank. A manufacturer's representative stated the lead is installed during manufacture as a balance to compensate for a heavier right wing. The lead piece is 13.5 inches long and .75 inch in diameter. The manufacturer gave instructions for reinstalling the balance weight at the original location. The submitter did not give a reason for the balance weight dislodging.

Part total time not reported.

POWERPLANTS AND PROPELLERS

ROTAX

Rotax; Model 912F; Improper Engine Maintenance; ATA 8500

During an accident investigation involving a Diamond Model DA20-A1 aircraft, the National Transportation Safety Board (NTSB) discovered the Rotax Model 912F engine maintenance was not being properly performed. Prior maintenance was accomplished in accordance with practices common to general aviation engines such as the Teledyne Continental O-200, instead of the requirements specified in the Rotax engine maintenance manual.

The Rotax Model 912F engine is a lightweight, four-cylinder, four-stroke, liquid-cooled aircraft engine which is certified under bilateral agreements between Transport Canada and the FAA for use in this aircraft. The engine has a very, very small piston-to-cylinder-wall clearance (.00039 inch), and it operates a geared, fully-controllable propeller with a slip clutch. The unique features of the Rotax engine require close adherence to the requirements outlined in the Rotax engine maintenance manual.

Rotax offers a 5-day maintenance familiarization course. They encourage all mechanics performing maintenance on Rotax engines to take the course. For registration and course information, call (250) 260-6299. The Rotax Model 912F engine is certified by

the FAA; therefore, it must be maintained in accordance with the manufacturer's maintenance technical data.

Rotax and other manufacturers build many different engine models which are used in amateur-built aircraft and experimental aircraft. There is no regulatory requirement dictating the maintenance practices for these engines; however, these engines have very specific manufacturer's maintenance technical data. For this reason, proper training and adherence to the manufacturer's technical data are highly recommended and, in many cases, critical to flight safety.

Engine total time-1,297 hours. Aircraft total time-2,228 hours.

TEXTRON LYCOMING

Textron Lycoming; Model O-235; Excessive Internal Wear; ATA 8530

This engine was installed in a Cessna Model 152 aircraft.

During an annual inspection, the technician changed the engine oil and filter. When he opened the oil filter, he found aluminum metal shavings.

A laboratory analysis determined the shavings originated from the piston pin plugs. The technician removed all four cylinders and found severe pitting at the lowest point of piston travel on each cylinder wall, as well as piston pin plug wear.

The manufacturer's representative speculated the damage occurred because the engine did not reach proper minimum-operating temperature. Since this aircraft is operated in Phoenix, Arizona, the submitter is not convinced low-operating temperature is a factor. The submitter experienced three additional like failures which occurred on low-time engines.

Part total time-466 hours.

ACCESSORIES

DEFECTIVE HARDWARE

An FAA-Certificated Repair Station purchased a quantity of self-locking castellated shear nuts (P/N MS17826-4) directly from Cessna.

While repairing a flight control system, the technician noticed the chamfer on one of the nuts was so deep that only one gripping thread remained. He checked the remaining nuts in stock, and discovered 37 out of 75 were bad.

The submitter reminds all technicians they should closely inspect everything before installation!

Part total time not applicable.

EASTERN AERO MARINE (EAM) LIFE PRESERVER

EAM Life Preserver; Model KSE-35HC2I8; Defective Inflater Assembly; ATA 2561

While the technician was attempting to inflate a duel cell adult life preserver, both toggles were pulled simultaneously. This occurred during a test of the emergency equipment in a repair shop.

The back cell inflated correctly; however, the front cell failed to inflate. The front cell failure was due to the actuating lever pulling out of the Henco inflater assembly housing. This allowed the inflater pin and spring to fall out of the assembly without breaking the CO^2 cartridge seal.

The technician disassembled both inflater assemblies and a comparison of the two actuating arm steel retainer pins revealed the front cell pin was approximately .092 inch

shorter than the back cell pin. This life preserver is not affected by EAM Service Bulletin SBV-25-2.

The submitter recommended that all operators using EAM life preservers with the Henco inflater assembly inspect the steel retainer pins to ensure they extend through the inflater housing and are flush with both sides.

Part total time not applicable.

AIR NOTES

A TRIBUTE TO THE FORGOTTEN MECHANIC

Through the history of world aviation many names have come to the fore....
Great deeds of the past in our memory will last, as they're joined by more and more....

When man first started his labor in his quest to conquer the sky he was designer, mechanic, and pilot, and he built a machine that would fly....

But somehow the order got twisted, and then in the public's eye the only man that could be seen was the man who knew how to fly....

The pilot was everyone's hero, he was brave, he was bold, he was grand, as he stood by his battered old biplane with his goggles and helmet in hand....

To be sure, these pilots all earned it, to fly you have to have guts....

And they blazed their names in the hall of fame on wings with bailing wire struts....

But for each of these flying heroes there were thousands of little renown, and these were the men who worked on the planes but kept their feet on the ground....

We all know the name of Lindbergh, and we've read of his flight to fame....

But think, if you can, of his maintenance man, can you remember his name?

And think of our wartime heroes, Gabreski, Jabara, and Scott....

Can you tell me the names of their crew chiefs? A thousand to one you cannot....

Now pilots are highly trained people, and wings are not easily won....

But without the work of the maintenance man our pilots would march with a gun....

So when you see mighty aircraft as they mark their way through the air, the grease-stained man with the wrench in his hand is the man who put them there....

The anonymous author of this composition must surely have had an appreciation and respect for those of us past and present who endeavor to promote aviation safety to the highest possible level. We endure the environmental extremes of the flight line and are content to allow those who are pilots to reap the glory of the public eye. We are content to remain in the background with the calm assurance that we have given our all in the pursuit of safety in aviation. We swell with pride as we watch the product of our labor rise gracefully from the runway and embrace a pristine sky.

The greatest and most valued recognition we can hope to receive comes from our peers and from within. The Aviation Awards Program, started recently by the FAA, has become one of the most coveted forms of recognition for maintenance personnel. Its rewards are not easily attained, and only those individuals with uncompromising and long-suffering moral and ethical values are found worthy. This program stresses education, training, and superior performance as well as the other attributes mentioned here, to praise those worthy of its tests. Our most valued assets are the tools of our trade, our reputation, integrity, and the respect of our customers who put their lives in our hands.

With the many technological and sociological advances in aviation over the years, many of the ideas put forth in this poem are no longer valid. For example, “bailing wire” is very much frowned upon as wing strut and hinge pin material. For the most part, maintenance personnel no longer fit the stereotype of a “grease-stained man.” The stereotype has been distorted and propagated by the entertainment media. The “grease-stained man” with a rag hanging from his pocket, a cap with a “turned-up bill,” and a “less than intelligent look on his face,” is purely a fictional character conjured to provide contrast and further embellish the flyer. Also, not all maintenance men are men; there are many women who have earned a position among our ranks and have made significant contributions to aviation maintenance safety.

Through the evolution of aviation maintenance, the requirements of brawn has been replaced by an ever-expanding requirement for brain power. With the complex nature of today's aeronautical products, has come maintenance people who can analyze, forecast, and troubleshoot problems by use of the computer. (Usually, we don't get “grease stained” from this activity.) The ever-changing demands of maintaining today's aircraft present a new challenge each day. These challenges are met with an eager enthusiasm to learn something new and to “put things right.” We approach each new challenge with a proud and confident demeanor which seems to say, “you can't break anything that I can't fix!”

SERVICE DIFFICULTY PROGRAM DATA AVAILABLE ON THE INTERNET

The FAA, Service Difficulty Reporting (SDR) Program is managed by the Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The information supplied to the FAA in the form of Malfunction or Defect Reports, Service Difficulty Reports, or by other means, is entered into the SDR data base. This information has been available to the public through individual written request. This method has provided the aviation public with an invaluable source of data for research or finding specific problems and trends.

The Service Difficulty Reporting Program relies on the support of the aviation public to maintain the high quality of data. AFS-620 has included the SDR data on an Internet web site, which is now available to the public. Using the web site will expedite the availability of information. The Internet web site address is:

http://av-info.faa.gov

On this web site, select “Aircraft” along the top of the page, next select “Service Difficulty Reporting,” and then select “Query SDR Data.”

This web site is now active; however, it is still under development and improvements are being made. We ask for your patience, ideas, and suggestions. If you find the web site useful, let us know. Also, spread the word about the availability of information on the web site. To offer comments or suggestions, you may contact the web master or call Tom Marcotte at (405) 954-4391.

Please remember that the information contained in the SDR data base is only as good as the input we receive from the aviation public. Also, the data used in production of this publication is derived from the SDR data base. In that regard, we solicit and encourage your participation and input of information.

This publication, as well as many other publications, was previously included on the “FedWorld” internet site. The FedWorld site was terminated on April 15, 2000. The data previously listed there is presently being transferred to the “av-info” web site.

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to:

U.S. Government Printing Office
ATTN: SSOM, ALERT-2G
710 N. Capital Street N. W.
Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**.

Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

SUBSCRIPTION FORM

Many of our readers voiced their concern when, due to a budget reduction, it was necessary to stop printing and distributing paper copies free of charge.

The Government Printing Office (GPO) agreed to print and distribute the Alerts. However, there will be a 1-year subscription charge for this service. The charge will be $25 per year for domestic mailings and $31.25 per year for foreign mailings. For your convenience, a subscription form is included in this publication.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

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You can access current and back issues of this publication from the internet at:
http://afs600.faa.gov

This web site also has view, search, E-Mail, and M or D submit functions.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between March 26, 2000, and April 24, 2000, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. The full SDR reports can be found on the internet at: <http://www.fedworld.gov/pub/faa-asi/faa-asi.htm>. This internet address takes you to the FAA ASI Library and the SDR reports are listed by weekly entries. This data base is maintained by the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620 located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION
Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFT MAKE	ENG MAKE	COMP MAKE	PART NAME	PART CONDITION	DIFF-DATE	T TIME
ACFT MODEL	ENG MODEL	COMP MODEL	PART NUMBER	PART LOCATION	FAA REPORT NO.	TSO
REMARKS						
			PLATE	CRACKED	03/09/2000	
			C60661	PROPELLER BLADE	2000040500053	5018

DURING ROUTINE INSPECTION, FOUR OF THE SIX PRELOAD PLATES WERE FOUND CRACKED. CRACKS STARTED AT THE PITCH CHANGE BRACKET CUT-OUT AREA AND RAN ACROSS THE FACE OF THE PLATE AND DOWN THE OUTSIDE

			CLAMP	DAMAGED	03/22/2000	
				PROPELLER BLADE	2000040500091	

THE PILOT OF A BEECH BARON DISCOVERED A BROKEN BOLT WITHIN THE PROP ASSEMBLY DURING A CAREFUL PRE-FLIGHT INSPECTION. BOTH PROPELLERS HAD RECENTLY UNDERGONE MAINTENANCE AT A PROPELLER REPAIR STATION. EVIDENCE SUGGESTED THE PROPELLER BLADECLAMP, PN C-3-51 (WHICH HOLDS THE PROP BLADE IN PROP HUB), WAS MAKING CONTACT AND EXERTING FORCE ON THE LATCH BRACKET CAUSING BOLTS SECURING BRACKET TO FAIL. THE CONTACT BETWEEN THE BLADE CLAMP AND BRACKET WAS A FUNCTION OF THE BLADE ANGLE SELECTED BY THE PILOT. IT IS UNCLEAR WHY CLEARANCE BETWEEN BLADE CLAMP AND LATCH BRACKET HAD DETERIORATED. HARTZELL CONTACTED AND IS INVESTIGATING.

		EAAEROMARINE	LIFE VEST	FAILED	02/25/2000	
				CABIN	2000040800221	

WHILE ATTEMPTING TO INFLATE THIS DUAL CELL ADULT LIFE PRESERVER, BOTH TOGGLES WERE PULLED SIMULTANEOUSLY. THE BACK CELL INFLATED CORRECTLY, THE FRONT CELL FAILED TO INFLATE DUE TO THE ACTUATING LEVER PULLING OUT OF INFLATOR ASSEMBLY HOUSING ALLOWING INFLATOR PIN AND SPRING TO FALL OUT OF ASSEMBLY WITHOUT BREAKING SEAL ON CO2 CARTRIDGE. DISASSEMBLY OF BOTHTHE GOOD AND FAILED INFLATOR ASSEMBLIES AND COMPARISON OF THE 2 ACTUATING ARM RETAINER PINS SHOWED THE FAILED ASSEMBLY PIN WAS APPROX 0.092 INCH SHORTER THAN THE RETAINER PIN OUT OF THE GOOD ASSY. NOTE THAT BOTH OF THESE PINS ARE STEEL. THIS VEST IS NOT AFFECTED BY EAM SB SBV-25-2 BY DATE OF MFG AND HAVING STEEL PINS. (X)

			NUT	MISMANUFACTURE	03/02/2000	
			MS178264	FUSELAGE	2000041500054	

PURCHASED MS17826-4 SELF-LOCKING CASTELLATED, SHEAR NUT DIRECTLY FROM CESSNA AIRCRAFT PART DEPT.

BEFORE INSTALLING ON A FLIGHT CONTROL BOLT, TECHNICIAN NOTICED THE CHAMFER ON THE NUT WAS SO DEEP THERE WAS ONLY ONE GRIPPING THREAD LEFT. AFTER CHECKING THE REST OF THE NUTS IN STOCK, FOUND 37 OUT

SHIELD DEBONDED 03/06/2000

E10950PK D5133 PROPELLER 2000041500058

EROSION SHIELD DEBOND BLADE NR 3, SN 1172. REMOVED AND REPLACED EROSION SHIELD IAW PROCEDURE 001 AND
HARTZELL MM. STATIC BALANCED PROPELLER IAW HARTZELL CMM.

ROTOL HUB CRACKED 02/23/2000 7429

660714255 PROPELLER ASSY 2000041500319

PROPELLER RECEIVED AT DOWTY AEROSPACE PROPELLERS FOR ROUTINE OVERHAUL. NOTED AT TEAR DOWN OF PROPELLER, 2 CRACKS AT HUB SPLIT LINE IN HUB REAR HALF AT NR 1 AND NR 2 BLADE PORT. HEAVY CHAPPING FOUND ON BOTH FRONT AND REAR HUB MATING FACES. (SPLIT LINE). HUB REJECTED FROM FURTHER SERVICE. (X)

ALLSN NOZZLE MISDRILLED 01/31/2000

250C20 E23001832 PT OIL 2000041500391

HOLES IN UPPER PART OF NOZZLE DRILLED IMPROPERLY, DISCOVERED ON SHELF. PARTS WAS NEW AND SUBMITTER STATED THIS WAS DONE DURING MANUFACTURING. NOTE: SHOULD HAVE 4 HOLES.

CONT SPRING DAMAGED 02/14/2000

O470* 1051324 IMPULSE 2000040500070

NEW PARTS HAVE FINGER PRINTS ON THEM. PARTS ARE NEW, NOT REMOVED FROM MANUFACTURER''''S BAG SINCE TIME OF BAGGING AT SUPPLY CENTER. SUBMITTER STATED PROBLEM IS SPRING STEEL WITH SWEAT FROM THE PERSONS WORKING ON THE PART.

GARRTT DISK NICKED 03/01/2000

TFE731* 30720705 LP TURBINE 2000040800220

NEW PART RECEIVED FROM HONEYWELL WITH TWO SMALL NICKS IN WEB AREA FORWARD SIDE AND DAMAGE IN POST FIR TREE AREA ON BOTHSIDES. (X)

GARRTT DISK DAMAGED 03/07/2000

TFE731* 30723515 LP TURBINE 2000040800260

NEW PART RECEIVED FROM HONEYWELL WITH GRIND MARKS THROUGHOUT FIR TREE AREA. REF: LOT NUMBER:

GARRTT SEAL LEAKING 02/01/2000

TFE73121C 30756441 ENGINE 2000040500007

ENGINE EXPERIENCED HIGH GEARBOX PRESSURE AT TEST CELL AFTER ENGINE CORE REPAIR WITH NEW NR 4 AND NR NR 5 SEALS AND RUNNERS. (X)

GARRTT SEAL LEAKING 02/01/2000

TFE73121C 30756392 ENGINE 2000040500008

ENGINE EXPERIENCED HIGH GEARBOX PRESSURE AT TEST CELL AFTER ENGINE CORE REPAIR WITH NEW NR 4 AND AND NEW NR 5 SEALS ANDRUNNERS. (X)

GARRTT SEAL LEAKING 02/01/2000

TFE73121C 30756332 ENGINE 2000040500026

ENGINE EXPERIENCED HIGH GEARBOX PRESSURE AT TEST CELL AFTER ENGINE CORE REPAIR WITH NEW NR 4 AND NR 5
SEALS AND RUNNERS. (X)

GARRTT SEAL LEAKING 01/20/2000 1946

TFE7315R 30755141 ENGINE 2000040500005

ENGINE EXPERIENCED IN-FLIGHT SHUT DOWN BY HIGH GEARBOX PRESSURE WHICH EXPANDED OIL TANK AND CREATED HOLE IN OIL TANK ATA SPOT WELD DUE TO HIGH GEARBOX PRESSURE. ENGINE LOST OIL PRESSURE AND WAS SHUT DOWN BY PILOT. (X)

GARRTT PUMP FROZEN 02/29/2000 13285

TPE331* 31080261 DRIVE GEAR 2000040500054

PUMP FROZE DURING FLIGHT STRIPING DRIVE GEAR. (X)

IAE BEARING DAMAGED 02/11/2000 1320

V2528D5 2A227401 NR 4 2000040500013

ENGINE RECEIVED FOR THIRD LPT BLADE DAMAGE. DISASSEMBLY INSPECTION REVEALED FLOODED NR 4 BEARING AREA/POSSIBLE FIRE ANDCONTACT BETWEEN T2 DISK AND 1-2 AIR SEAL. (X)

IAE BEARING DAMAGED 02/11/2000 1320

V2528D5 2A227401 NR 4 2000040500014

ENGINE RECEIVED FOR 3RD LPT BLADE DAMAGE. DISASSEMBLY INSPECTION REVEALED FLOODED NR 4 BEARING AREA/POSSIBLE FIRE AND CONTACT BETWEEN T2 DISK AND 1-2 AIR SEAL. (X)

PWA IGNITOR FAILED 02/09/2000

PW305 CH34682 ENGINE 2000041200119

RECEIVED 3 EACH IGNITORS FROM SUPPLY. THE 4TH IGNITOR OPS CHECKED OK. BATCH NUMBER UNKNOWN. THE IGNITOR USED NORMALLY IS INSTALLED ON P&W 305 SERIES ENGINES. P/N 34682. (X)

PWA BEARING FAILED 12/18/1999 9116

PW4460 50A096 NR 4 MAIN 2000040800083

DURING CRUISE, LOUD BANG AND VIBRATION. ENGINE SHUTDOWN. DISASSEMBLY INSPECTION REVEALED FRACTURED NR 2 MAIN BEARING,EXTENSIVE HPC/HPT/LPT DAMAGE AND FIRE DAMAGE NR 2 BEARING AREA. FAILED MATERIAL SENT TO P&W E.H. FOR ANALYSIS. (X)

AEROSP TMECA DRAIN VALVE LEAKING 01/28/2000 2008

SA365N1 ARRIEL1C 0174078010 START DRAIN 2000040800182

VALVE LEAKING AROUND SPLIT LINE OF CASING. (X)

AMD UPLOCK FAILED 03/15/2000 1

FALCON20 SP3982 MLG 2000040500056

TWO NEW SWITCHES WERE INSTALLED IN THE LT MAIN GEAR DOOR UPLATCH. (BOTH ARE SAME P/N AND DATE OF MFG). ONE SWITCH CONTROLS THE RED DOOR UNLOCK LIGHT, AND THE OTHER CONTROLS DOOR AND GEAR SEQUENCING. THE GEAR WAS CYCLED SUCCESSFULLY NUMEROUS TIMES WITH THE ACFT ON JACKS, WHEN THE CREW ATTEMPTED TO EXTEND THE GEAR ON THE SECOND FLIGHT, BOTH NEW SWITCHES FAILED. THIS CAUSED 2 PROBLEMS. THERE WAS NO INDICATION IN THE COCKPIT THAT THE LT MAIN DOOR OPENED. (NO RED LIGHT). THE CREW WAS ABLE TO SEE THE LT GEAR DID EXTEND FROM THE COCKPIT PROVING THE DOOR HAD OPENED. AFTER
LANDING, THE CREW THEN NOTICED THE LT DOOR HAD REMAINED IN THE OPEN POSITION.

AMD CIRCUIT FAILED 04/05/2000

FALCON20 MS252442550722 COCKPIT

2000040800037

WHILE CHECKING CIRCUIT BREAKERS FOR AD 70-22-04, FOUND THIS BREAKER WITH MFG DATE OF 9-72 NEARLY JAMMED PER BOEING SB 24-1019 INSPECTION. BREAKER DID NOT HAVE FALCON JET IDENTIFIER STICKER ''431L2'' ON IT, SO APPARENTLY IT HAS BEEN INSTALLED AFTER AIRCRAFT LEFT THE FACTORY (AW DATE 9-25-81). BREAKER IS FOR RT LANDING LIGHT. BREAKER FOR LT LANDING LIGHT APPEARS ORIGINAL, AND IS MADE BY MECHANICAL

AMD GARRTT RETAINER BROKEN 02/29/2000 697

FALCON900 TFE7315BR 30756842 ENGINE 2000040800244

DISASSEMBLED ENGINE BECAUSE OF BAD S.O.A.P. SAMPLE. FOUND NR 3 SEAL RUNNER RETAINER BROKEN. (X)

AMRGEN CABLE DAMAGED 03/08/2000 3500

AA5A PULLEY CLUSTER 2000040500033

DURING ANNUAL INSPECTION, FOUND CABLES DETERIORATED AND FRAYED AS WOULD BE FOUND IF INSPECTING SERIES AS AN AA1, AS SPECIFIED IN AD 72-6-2. AS THE REST OF THE GRUMMAN SINGLE ENGINE FLEET HAS SIMILAR CABLE RUNS AS THE AA1 SERIES AND THE EARLY AA5''''S WITH EARLIER S/N''''S, AD 72-06-02 SHOULD BE AMENDED TO INCLUDE ALL TYPE SERIES THAT EMPLOY THE SIMILAR PULLEY CLUSTER JUST AHEAD OF THE FRONT SPAR IN THE CABIN. WEAR APPEARS TO BE FROM NORMAL OPERATIONS/AGE OF CABLES. NORMALACCUMULATIONS OF DEBRIS AND DIRT IN AREA OF PULLEYS AND THE PULLEYS WERE NOT FROZEN. DUE TO THIS INSTALLATIONS DESIGN.

AMTR PEDAL BROKEN 01/31/2000 194

KITFOXIV 14D01 RUDDER CONTROL 2000040500138

RIGHT RUDDER PEDAL SEPARATED FROM TORQUE TUBE. THE AREA WHERE THE TORQUE TUBE AND RUDDER PEDAL ARE ATTACHED CRACKED BELOW THE WELD. THIS WAS CRACKED PRIOR TO THE INCIDENT. WHEN HARD RIGHT RUDDER PEDAL WAS APPLIED, IT BROKE AND SPLIT TORQUE TUBE LOOSING CONTROL OF AIRCRAFT. (X)

BELL BLADE DAMAGED 10/22/1999 2769

206B 206010200133 MAIN ROTOR 2000040500073

MAIN ROTOR BLADE FACTORY INSTALLED WEIGHT DISLODGED DURING OPERATION STRIKING MAIN ROTOR BLADE TIP CAP. TIP CAP TRAILING EDGE WAS BENT OUTBOARD APPROXIMATELY 30 DEGREES AND APPROXIMATELY ONE INCH OF WEIGHT PROTRUDED THROUGH OUTBOARD END OF SPAR. UPPER AND LOWER MAIN ROTOR BLADE SKIN BALLOONED OUT FROM FORCE OF WEIGHT IMPACT. MAIN ROTOR BLADE WAS RETURNEDTO BELL HELICOPTER

BELL COUPLING CHIPPED 03/09/2000

206B 206040118001 M/R DRIVE 2000041500244

DURING NORMAL 600-HOUR/12-MONTH INSPECTION AND REPACK OF MAIN ROTOR DRIVESHAFT, DISCOVERED A GEAR TOOTH (ON THE END) OF THE OUTER COUPLING WAS CHIPPED. SUBMITTER SIFTED THROUGH THE GREASE, BUT COULD NOT FIND ANY EVIDENCE OF THIRD CHIP. PART WAS RED-TAGGED AND DESTROYED. A NEW OUTER COUPLING OF SAME PART NUMBER INSTALLED AND AIRCRAFT RETURNED TO SERVICE.(X)

BELL ALLSN ALLSN COMBUSTION CRACKED 02/03/2000

206B 250C20B 6870992 TURBINE SECTION 2000040800084 199

DURING HOVERING ON A TRAINING FLIGHT, THE PILOT NOTICED THAT TOT TEMPERATURE WAS HIGHER THAN NORMAL. AFTER TROUBLESHOOTING WHICH INCLUDED CHANGING BLEED VALVE AND CHECKING ANTI-ICE FOR PROPER CLOSING, THERE WAS NO CHANGE. POWER CHECK ON ENGINE INDICATED SUBSTANTIAL POWER LOSS. THIS WAS A RENTAL ENGINE SO THE AMOC WHICH OWNED THE ENGINE WAS NOTIFED. THEYCAME AND REMOVED THE ENGINE. UPON REMOVAL, A CRACK WAS NOTICED ON THE BACK OF THE COMBUSTION CASE NEXT TO THE FUEL NOZZLE ABOUT 3 INCHES LONG. ENGINE RETURNED TO AMOC FOR REPAIR. (X)

BELL ARM INOPERATIVE 03/15/2000

206B3 206011139001 TAIL ROTOR 2000041500104

ARM ASSEMBLY IS INOPERATIVE.

BELL FILTER INOPERATIVE 03/15/2000

206B3 1740996 ENGINE OIL 2000041500479

FILTER IS INOPERATIVE. WILL NOT EXCITE.

BELL ARMATURE VIBRATES 12/09/1999 71

206L1 STARTER/GEN 2000040800272

ARMATURE VIBRATES EXCESSIVELY AT OPERATING SPEED. FAILED AFTER 71.3 TSO. REMOVED AND REPLACED. (X)

BELL AMETEK BUMPER BLOCK DAMAGED 01/14/2000

206L1 SEL019DS1 COCKPIT 2000041500337

DURING START, POINTER STOP ARM STUCK TO LATEX BUMPER. REPLACED LATEX BUMPER WITH NON-STICKING

BELL BLADE CORRODED 02/04/2000 2664

206L1 206015001107 MAIN ROTOR 2000041500386

DURING DAILY INSPECTION, CORROSION AND DEBONDED AT ROOT END GRIP PLATE.

BELL STUD LOOSE 01/25/2000

206L3 206011809109 T/R PITCH HORN 2000041200182

TAIL ROTOR PITCH HORNS, PITCH CHANGE LINK STUDS LOOSE. REPLACED PART. (X)

BELL BEARING DAMAGED 02/19/2000 932

206L3 206310105101 TAIL ROTOR 2000041500018

BEARINGS WERE GAULING AND CAUSING STIFF PEDALS AT 100 PERCENT. INSTALLED 4 NEW BEARINGS IN THE BLADES.

BELL DAMPER WORN 03/16/2000

212 204031920003 MAIN ROTOR 2000041500107

DAMPER IS WORN EXCESSIVELY.

BELL STRAP TORN 03/16/2000

212 J154524V MLG 2000041500109

STRAP IS TORN. (RUBBER COMING APART).

BELL INDICATOR FLUCTUATES 01/07/2000

222 222375022105 GAS PRODUCER 2000040800235

INDICATOR SLOW TO COME UP. FLUCTUATES AT 90 PERCENT. REMOVED AND REPLACED. (X)

BELL LYC FUEL CONTROL FAILED 01/04/2000

222 LTS101650C 4302022307 ENGINE 2000040800271

FUEL CONTROL FAILED UPON INSTALLATION. REMOVED AND REPLACED. (X)

BELL LATCH WORN 09/27/1999
230 1008401 CREW DOOR 2000040800187
WORN CAM. REMOVED AND REPLACED. (X)
BELL LIGHT FAILED 12/09/1999
230 230375011103 COCKPIT 2000041200056
SEGMENT ABOVE AIR DISTRIBUTION SWITCHES NOT ILLUMINATING, RADAR AND RADAR IND.
BELL STOP GOUGED 08/27/1999 2523
230 222031525101 CREW DOOR 2000041200057
STOP GOUGED. REMOVED AND REPLACED. (X)
BELL STOP GOUGED 08/27/1999 2523
230 222031525103 CREW DOOR 2000041200058
TOP GOUGED. REMOVED AND REPLACED. (X)
BELL SHUNT WORN 08/25/1999
230 1820300150 DC GEN SYSTEM 2000041200089
SHUNT WORN AND DISCOLORED. REMOVED AND REPLACED. (X)
BELL ROD END WORN 08/31/1999
230 230030535101 TRANSMISSION 2000041200202
BEARINGS WORN. REMOVED AND REPLACED. (X)
BELL BEARING WORN 08/31/1999
230 230030535103 XMSN MOUNT 2000041200203
BEARING WORN. REMOVED AND REPLACED. (X)
BELL DUCT CRACKED 12/29/1999
230 230063301102 EXHAUST 2000042200031
EXHAUST DUCT CRACKED AT AFT LOWER SIDE. REMOVED AND REPLACED. (X)
BELL TRANSDUCER FLUCTUATES 08/01/1999
230 222375077105 COCKPIT 2000042200168
PRESSURE READING FLUCTUATIONS. REMOVED AND REPLACED. (X)
BELL SEAL LEAKING 12/31/1999
230 1223328 M/R GEARBOX 2000042200289
SEAL LEAKING. REMOVED AND REPLACED. (X)
BELL BLOWER VIBRATION 01/15/2000 2135
230 230365001101 OIL COOLER 2000042200521
OIL COOLER BLOWER HAD HIGH VIBRATION, .4 IPS. REMOVED AND REPLACED. (X)
BELL BLADE CRACKED 02/09/2000 1257
230 222016001131 TAIL ROTOR 2000042200523
PITCH CHANGE BEARINGS CRACKED. REMOVED AND REPLACED. (X)
BELL RING LEAKING 12/31/1999
230 28175018 MAIN ROTOR 2000042200644
MATING RING LEAKING. REMOVED AND REPLACED. (X)
BELL LANDING LIGHT INOPERATIVE 01/18/2000
230 900601 FUSELAGE 2000042200764
LANDING LIGHT HAD NO POWER AT LIGHT. LIGHT WILL NOT COME ON. REMOVED AND REPLACED. (X)
BELL ALLSN SHAFT WILL NOT 01/06/2000 1246
230 250C30 222044006109A MAIN ROTOR 2000042200649
ENGINE SIDE OF SHAFT WILL NOT BALANCE. REMOVED AND REPLACED. (X)
BELL SLAT DAMAGED 02/11/2000 865
407 407023001101 HORIZONTAL STAB 2000040800225

SLATS REPLACED WITH NEW. C/W BELL ASB 407-99-32. (X)

BELL BEARING DAMAGED 02/11/2000 674

407 407340339103 TAIL ROTOR DRIVE 2000040800227

BEARINGS REPLACED WITH NEW. C/W BELL AD 2000-02-12. (X)

BELL BEARING WORN 02/20/2000 979

407 407340339103 TAIL ROTOR 2000041500305

DURING DAILY INPSECTION FOUND BEARINGS WORN, AXIAL PLAY.

BELL BEARING ROUGH 02/03/2000 745

407 407040730310 407340339103 TAIL ROTOR 2000041500309

DURING DAILY INSPECTION BOTH BEARINGS FOUND ROUGH.

BELL BELL BEARING ROUGH 03/05/2000 329

407 407340339103 TAIL ROTOR DRIVE 2000041500499

BEARINGS NOISEY AND ROUGH. REMOVED AND REPLACED 2 EACH BEARINGS. (X)

BELL BELL BEARING ROUGH 03/05/2000 5329

407 407340339103 TAIL ROTOR DRIVE 2000041500500

BEARINGS NOISEY AND ROUGH. REMOVED AND REPLACED 2 EACH BEARINGS. (X)

BELL SWASHPLATE DAMAGED 01/24/2000 1193

407 406010418101 MAIN ROTOR 2000041500562

SWASHPLATE SEAL, PN 406-310-407-101, WORE GROOVE IN CAP, P/N 406-010-418-101, CAUSING GREASE FROM BEARINGS BELOW TO ENTER TOP OF SWASHPLATE OUTER EDGE UNDER BOOT. THIS CAN ALLOW GREASE TO CONTAMINATE TEFLON LINED RACES OF UNIBALL ASSEMBLYRESULTING IN CHANGES OF SWASHPLATE FRICTION SETTING WHICH CAUSES STIFFNESS IN CYCLIC AND COLLECTIVE CONTROL INPUTS. SUBMITTER RECOMMENDED CAP BE MADE OF TOUGHER MATERIAL TO PREVENT DAMAGE FROM SEAL, P/N 406-310-407-101.

BELL SLAT DAMAGED 02/09/2000

407 407023001101 TAIL BOOM 2000041500564

SLATS REJECTED. REPLACED WITH NEW. C/W BELL ASB 407-99-32. (X)

BELL SUPPORT CRACKED 02/23/2000 3773

407 407030801101 407023800118S TAILBOOM 2000042200386

DURING DAILY INSPECTION, FOUND CRACK IN RADIUS.

BELL HOUSING CRACKED 02/09/2000

407 407040303105 206061432121 BLOWER 2000042200390

DURING DAILY INSPECTION, BLOWER HOUSING FOUND CRACKED.

BELL PAD WORN 02/08/2000 819

407 D01661 ROTOR BRAKE 2000042200748

DURING REMOVAL OF ROTOR BRAKE CALIPER ASSEMBLIES, FOUND GUIDE HOLES ON PAD ASSY AND GUIDE BOLTS WORN. BOLT, PN D0166-1, WORN IN EXCESS OF 50 PERCENT OF BOLT DIAMETER. PAD ASSY, PN D0163-1, GUIDE HOLES WORN IN EXCESS OF 65 PERCENT OF WALL THICKNESS. POSSIBLE CAUSE OF PREMATURE WEAR MAY BE FROM EXCESSIVE VIBRATION AND SMALL AREA OF CONTACT AT BOLT AND PAD ASSY GUIDE HOLES. SUBMITTER RECOMMENDED INSPECTION OF BOLTS AND PAD ASSEMBLIES EVERY 600 HOURS.

BELL PAD WORN 02/08/2000 819

407 D01661 ROTOR BRAKE 2000042200749

DURING REMOVAL OF ROTOR BRAKE CALIPER ASSEMBLIES, FOUND GUIDE HOLES ON PAD ASSY AND GUIDE BOLTS WORN. BOLT, PN D0166-1, WORN IN EXCESS OF 50 PERCENT OF BOLT DIAMETER. PAD ASSY, PN D0163-1, GUIDE HOLES WORN IN EXCESS OF 65 PERCENT OF WALL THICKNESS. POSSIBLE CAUSE OF PREMATURE WEAR MAY BE FROM EXCESSIVE VIBRATION AND SMALL AREA OF CONTACT AT BOLT AND PAD ASSY GUIDE HOLES. SUBMITTER RECOMMENDED INSPECTION OF BOLTS AND PAD ASSEMBLIES EVERY 600 HOURS.

BELL ALLSN HOUSING MISMANUFACTURE 12/27/1999 1785

407 250C47B 23065593 23061928 COMPRESSOR 2000041500387

DEFECT FOUND WHEN OLD COATING WAS REMOVED. FOUND THICKNESS OF PARENT METAL BELOW SPECS (PART WAS MANUFACTURED BELOW MINIMUM SPECS).

BLANCA CONT EXHAUST WORN 03/08/2000 145

1730A IO520K 652956 NR 1 CYLINDER 2000040800078

EXCESSIVE WEAR FOUND DURING COMPRESSION TEST. EXHAUST VALVE WAS LEAKING. EX GUIDE MEASURED .4384 INCH AT THE TOP AND .4624 INCH AT THE BOTTOM. EX VALVE MEASURED .4337 INCH AT THE TOP OF THE STEM AND .4263 INCH AT APPROX 2 INCHES FROM THE BOTTOM OF THE VALVE. CLEARANCE BETWEEN VALVE AND GUIDE IS .0361 INCH. SERVICEABLE LIMIT IS .006 INCH. NO METAL WAS FOUND IN THE OIL SCREEN. ENGINE IS NOT EQUIPPED WITH A SPIN ON FILTER. ALL OTHER CYLINDERS'' COMPRESSIONS TESTED OK. ENGINE WAS INSTALLED AFTER FACTORY REMAN IN JAN 98. M OR D SUBMITTED BY HAP''S AIR SERVICE AMES, IA. (X)

BLANCA CONT GUIDE WORN 03/08/2000 145

1730A IO520K 643767 NR 1 CYLINDER 2000040800079

EXCESSIVE WEAR FOUND DURING COMPRESSION TEST. EXHAUST VALVE WAS LEAKING. EX GUIDE MEASURED .4384 INCH AT THE TOP AND .4624 INCH AT THE BOTTOM. EX VALVE MEASURED .4337 INCH AT THE TOP OF THE STEM AND .4263 INCH AT APPROX 2 INCHES FROM THE BOTTOM OF THE VALVE. CLEARANCE BETWEEN VALVE AND GUIDE IS .0361 INCH. SERVICEABLE LIMIT IS .006 INCH. NO METAL WAS FOUND IN THE OIL SCREEN. ENGINE IS NOT EQUIPPED WITH A SPIN ON FILTER. ALL OTHER CYLINDERS'' COMRPESSIONS TESTED OK. ENGINE WAS INSTALLED AFTER FACTORY REMAN IN JAN 98. M OR D SUBMITTED BY HAP''S AIR SERVICE, AMES, IA. (X)

BLANCA CONT WIRE ARCED 02/10/2000

1730A IO520K ALY8402 ALTERNATOR 2000041500487

OPERATOR REPORTED DISCHARGE FROM ALTERNATOR IN CRUISE FLIGHT. MASTER SWITCH WAS TURNED OFF. AIRCRAFT LANDED WITHOUT INCIDENT. MAINTENANCE DISCOVERED ONE BRUSH WIRE BROKEN AND THE RETAINER SPRING WELDED TO THE HOLDER. (X)

BNORM LYC ENGINE FAILED 12/12/1999 7338

BN2B26 O540E4C5 RIGHT 2000042200456 598

ON CRUISE FLIGHT, RIGHT ENGINE STARTED TO VIBRATE AND LEAK OIL. PILOT DECLARED EMERGENCY AND LANDED AT TORTOLA AIRPORT(BEEF ISLAND). PRELIMINARY INSPECTION REVEALED RIGHT ENGINE CRANKCASE CRACKED.
ENGINE CHANGE. (X)

BOLKMS INDICATOR INTERMITTENT 12/22/1999

BK117A1 1179405303 TRIPLE TACH 2000040800234

ROTOR NEEDLE DROPS INTERMITTENTLY. (X)

BOLKMS PUMP WORN 02/03/2000

BK117A1 40165 HYD SYSTEM 2000042200643

SPLINES ON HYDRAULIC PUMP WORN. REMOVED AND REPLACED. (X)

BOLKMS INDICATOR MALFUNCTIONED 12/22/1999

BK117A3 1179405303 TRIPLE TACH 2000040800269

N2 ON NR 2 ENGINE SIDE DRAGS DOWN. REMOVED AND REPLACED. (X)

BOLKMS GYRO FAILED 01/14/1999

BK117A3 5040017926 COCKPIT 2000040800270

ATTITUDE GYRO WILL NOT CAGE. VERY ERRATIC. REMOVED AND REPLACED. (X)

BOLKMS ACTUATOR FAILED 12/23/1999

BK117A3 741C000005 TAIL ROTOR 2000040800273

ACTUATOR FAILS TEST AND HUNTS (RUNAWAY TEST). REMOVED AND REPLACED. (X)

BOLKMS INDICATOR INTERMITTENT 12/23/1999

BK117A3 1179405303 TRIPLE TACH 2000041200090 66

TACHOMETER OPERATED 65.9 HOURS SINCE REPAIR. NR 2 N2 NEEDLE INTERMITTENT, READS 2 PERCENT LOW, WENT TO ZERO PERCENT, BACK UP TO 50 PERCENT, THEN UP TO 90-95 PERCENT IN-FLIGHT. NR 1 N2 AND NR REMAINED

BOLKMS GYRO INOPERATIVE 10/14/1999

BK117A3 40205773 COCKPIT 2000041200200

DIRECTIONAL GYRO UNSERVICEABLE UPON INSTALLATION. COMPASS READS 90 PERCENT OFF.

BOLKMS CONTROLLER INOPERATIVE 02/11/2000 3

BK117A3 1179203103 COCKPIT 2000042200765

COPILOT''S LIGHTING INOPERABLE. NO OUTPUT FROM UNIT. WORKED 2.7 HOURS AFTER INSTALLATION. REMOVED
AND REPLACED. (X)

BOLKMS CONTROLLER INOPERATIVE 02/09/2000

BK117A3 1179203103 COCKPIT 2000042200766
CONTROL UNIT WILL NOT ILLUMINATE LIGHT. REMOVED AND REPLACED. (X)
BOLKMS INDICATOR FLUCTUATES 01/13/2000
BK117A3 1179405603 COCKPIT 2000042200770
INDICATOR FLUCTUATES UNDER POWER. REMOVED AND REPLACED. (X)

BOLKMS INDICATOR DAMAGED 01/12/2000
BK117A3 1179405603 COCKPIT 2000042200771
NG INDICATOR TRIPPED CIRCUIT BREAKER WHEN INSTALLED AFTER REPAIR. REMOVED AND REPLACED. (X)
BOLKMS LYC SEAL LEAKING 12/07/1999 45
BK117A3 LTS101650B1 230307203 CSD 2000040800184
OUTPUT SEAL LEAKING. REMOVED AND REPLACED. (X)
BOLKMS INDICATOR INOPERATIVE 01/15/2000
BK117A4 066304605 COCKPIT HSI 2000042200032
KI525A INTERNAL LIGHT INOPERATIVE. REMOVED AND REPLACED. (X)
BOLKMS INDICATOR FAILED 03/01/2000
BK117A4 1179405303 TRIPLE TACH 2000042200527
NR 2 NEEDLE WENT TO ZERO IN-FLIGHT. REMOVED AND REPLACED. (X)
BOLKMS INDICATOR INACCURATE 01/15/2000
BK117A4 1179405303 TRIPLE TACH 2000042200775
TRIPLE TACHOMETER, NR 2 NEEDLE READS IMPROPER. REMOVED AND REPLACED. (X)
BOLKMS LIGHT INOPERATIVE 01/06/2000
BK117B1 G62504 FUSELAGE 2000040800185
SEARCH LIGHT WILL NOT RETRACT. REMOVED AND REPLACED. (X)
BOLKMS CLUTCH FROZEN 12/26/1999 2919
BK117B1 4639202011 ENGINE 2000040800310
CLUTCH LOCKED UP AND SEVERED NR 2 ENGINE DRIVESHAFT. REMOVED AND REPLACED. (X)
BOLKMS POWER SUPPLY FAILED 12/28/1999
BK117B1 1179203903 STROBE 2000041200088
POWER SUPLY FAILED OPS CHECK (NO CHARGE). REMOVED AND REPLACED. (X)
BOLKMS DRIVE SHAFT SHEARED 12/26/1999
BK117B1 1171601001 TAIL ROTOR 2000041200199
DRIVESHAFT SEVERED. REMOVED AND REPLACED. (X)
BOLKMS BLADE DEBONDED 01/24/2000 193
BK117B1 117151321 MAIN ROTOR 2000042200033
LEADING EDGEOF MAIN ROTOR BLADE DEBONDING (INBOARD JOINT). 193.4 HOURS SINCE REPAIR/OVERHAUL. REMOVED AND REPLACED.(X)
BOLKMS GYRO FAILED 01/31/2000
BK117B1 5040017926 COCKPIT 2000042200166
ATTITUDE GYRO WILL NOT CAGE. TECHNICIAN STATED UNIT ONLY WORKED FOR ONE WEEK AFTER INSTALLATION. REMOVED AND REPLACED. (X)
BOLKMS COMPUTER FAILED 11/02/1999
BK117B1 11788292 SPAS 2000042200288
ACTUATOR NOT MOVING. WILL NOT TEST. REMOVED AND REPLACED. (X)
BOLKMS LIGHT INOPERATIVE 10/21/1999
BK117B2 67839 FUSELAGE 2000041200201
SEARCH LIGHT WILL NOT EXTEND. REMOVED AND REPLACED. (X)
BOLKMS ENCODER MALFUNCTIONED 01/24/2000

BK117B2 1042011968E COCKPIT 2000042200769
ALTIMETER OUT OF CALIBRATION. DOES NOT AGREE WITH COPILOT''S ALTIMETER OR TEST BOX. OFF AT 3,000 FEET.
REMOVED AND REPLACED. (X)
BOLKMS BEARING WORN 12/23/1999
BK117C1 BELLCRANK 2000040800233
BEARINGS WORN. REF: RAM R023415. REMOVED AND REPLACED. (X)
BOLKMS POWER SUPPLY DISCHARGED 11/04/1999
BK117C1 1179203903 LIGHTS 2000041200091
POWER SUPPLY WILL NOT HOLD CHARGE. REF: RMA R022695. REMOVED AND REPLACED. (X)
BOLKMS GUIDE WORN 02/22/2000
BK117C1 1172427302 CREW DOOR 2000042200404
RIGHT GUIDE WORN. REMOVED AND REPLACED. (X)
BOLKMS FIREWALL CRACKED 02/24/2000
BK117C1 1176625501 ENGINE BAY 2000042200525
FIRE WALL ASSEMBLY CRACKED. REMOVED AND REPLACED. (X)
BOLKMS INDICATOR INOPERATIVE 01/19/2000
BK117C1 1179403605 TRANSMISSION OIL 2000042200641
TRANS OIL INDICATION LIGHT INOPERATIVE. REMOVED AND REPLACED. (X)
BOLKMS TMECA INJECTOR CLOGGED 01/25/2000
BK117C1 ARRIEL1 0283317500 ENGINE 2000042200638
INJECTOR CLOGGED. REMOVED AND REPLACED. (X)
BOLKMS TMECA INJECTOR CLOGGED 01/25/2000
BK117C1 ARRIEL1 0283317500 ENGINE 2000042200639
INJECTOR CLOGGED. REMOVED AND REPLACED. (X)
BOLKMS BLADE DAMAGED 12/23/1999 8819
BO105LSA3 10515150 MAIN ROTOR 2000040800274
BLADE WOULD NOT BALANCE WITH OPPOSITE BLADE. REMOVED AND REPLACED. (X)
BOLKMS BLADE UNBONDED 12/23/1999 8819
BO105LSA3 10515150 MAIN ROTOR 2000040800275
BLADE WAS COMING UNSTACKED IN-FLIGHT. REMOVED AND REPLACED. (X)
BOLKMS INDICATOR READS HIGH 02/15/2000 342
BO105LSA3 10594564 M/R MAST 2000042200003
MAST INDICATOR OUT OF CALIBRATION. READING HIGH SETTING OF LIGHT. REMOVED AND REPLACED. (X)
BOLKMS TRANSMITTER READS HIGH 02/15/2000 342
BO105LSA3 10594575 ENGINE TORQUE 2000042200526
TORQUE TRANSMITTER OUT OF CALIBRATION. READING HIGH SETTING OF LIGHT. REMOVED AND REPLACED. (X)
BOLKMS INDICATOR MALFUNCTIONED 03/02/2000
BO105S 066304605 COCKPIT HSI 2000042200522
NEEDLE DOES NOT FULLY DEFLECT. REMOVED AND REPLACED. (X)
BOLKMS WIRE DAMAGED 02/02/2000
BO105S CIX100XVHGK66 COMM 2000042200642
UPON INITIAL INSTALLATION, CORD SQUEALS AS SOON AS HOOKED UP. REMOVED AND REPLACED. (X)
BOLKMS ALLSN ACTUATOR MALFUNCTIONED 11/30/1999
BO105S 250C20B 1092T1002W ANTI-ICE SYSTEM 2000041200018
PRIOR TO INSTALLATION, PERFORMED OPS CHECK, BLOWN CIRCUIT BREAKER. REMOVED AND REPLACED. (X)
BRAERO LINE CUT 03/06/2000 4211

BAE125800A 25VF3323309 VACUUM SYSTEM 2000040800245

VACUUM LINE FOR THE PRESSURIZATION SYSTEM LINE, PN 25VF3323-309, RUNS UNDER THE AILERON CABLE. THIS LINE IS .3750 INCHOUTSIDE DIAMETER HAD A CUT IN IT FROM CABLE .1875 INCH DEEP. CUSTOMER REPORTED HAVING PROBLEMS REGULATING PRESSURIZATION SYSTEM IN THE NORMAL OR EMERGENCY SYSTEM. (X)

CESSNA STRUCTURE DAMAGED 01/21/2000

152 04320016 HORIZONTAL STAB 2000040800129

OBTAINED ONE RT HORIZ STAB L/E RT ASSY FROM CESSNA FOR REPAIR OF A DAMAGED STAB. THE NUTPLATE ON THE RIB MUST BE USED TO PROPERLY ORIENT THE RIB TO THE FUSELAGE STRUCTURE BEFORE RIVET HOLES ARE DRILLED TO ATTACH THE RIB TO THE STAB SPAR AND LEADING EDGE SKID. THE NEW RIB WAS FOUND CURVED EXCESSIVELY ALONG ITS LONGITUDINAL AXIS CAUSING THE TRAILING EDGE OFTHE RIB TO BE IMPOSSIBLE TO INSTALL WITH PROPER RIVET EDGE DISTANCE. OBTAINED 2 MORE RIBS FROM CESSNA TO COMPLETE THISREPAIR. BOTH HAVE THE SAME DEFECT. THIS DEFECT IS MOST APPARENT WHEN RIBS ARE LAID ON THEIR SIDE ON A FLAT SURFACE AND COMPARED TO A PROPERLY FORMED RIB. (X)

CESSNA LYC FUEL TANK CONTAMINATED 01/29/2000 7679

152 O235L2C LEFT 2000040800143 2107

ENGINE FAILURE AFTER TAKEOFF. OUTSIDE AIR TEMPERATURE BELOW FREEZING FOR APPROX 2 WEEKS BEFORE FLIGHT. SNOW/SLEET IN AREA SEVERAL DAYS PRIOR TO FLIGHT. POSSIBLE CAUSE WAS WATER CONTAMINATED FUEL
OR CARBURETOR ICING. DRAINED FUEL TANKS,WATER FOUND IN LT FUEL TANK. FLUSHED FUEL SYSTEM. CHANGED
FUEL CAP TO HELP PREVENT RECURRENCE. (X)

CESSNA LYC FACET FLOAT STUCK 03/29/2000

152 O235L2C 30766 CARBURETOR 2000042200848

ENGINE LOST POWER. POSSIBLE CAUSE WAS LACK OF FUEL CAUSED BY STICKING FLOAT. REMOVED CARBURETOR AND DISASSEMBLED. COULD FIND NO CAUSE FOR FLOAT TO STICK. SUBMITTER SUGGESTED TO PREVENT RECURRENCE, USE NEW STYLE FLOAT AT OVERHAUL. (X)

CESSNA LYC CYLINDER DAMAGED 03/02/2000 466

152 O235N2C 05K21123 ENGINE 2000040500089

WHILE PERFORMING ANNUAL INSP, ALUMINUM SHAVINGS WERE FOUND IN THE OIL FILTER. FILTER SENT TO LYC FOR
ANALYSIS AND DETERMINED TO BE PISTON PIN PLUG MATERIAL. UPON REMOVAL OF ALL 4 CYLINDERS, SEVERE PITTING FOUND AT BOTTOM OF EACH CYL WALLAT THE POINT WHERE PISTON TOUCHES ITS LOWEST TRAVEL. ALL 4
CYL''S REJECTED AND FACTORY NEW INSTALLED. FACTORY STATES THIS IS RESULT OF ENG NOT REACHING PROPER
OPERATING TEMP. ACFT IS OPERATED IN PHOENIZ, AZ, OIL TEMP GAUGE IS ACCURATE.

CESSNA LYC CYLINDER DAMAGED 03/02/2000 681

152 O235N2C 05K21123 ENGINE 2000040500090

WHILE PERFORMING ANNUAL INSP, SMALL ALUMINUM PARTICLES WERE FOUND IN THE OIL FILTER. A BORESCOPE INSP REVEALED WEAR ONCYLINDER WALLS AND PITTING AT THE BASE OF EACH CYL (INSIDE) AT THE POINT OF THE PISTON''S FARTHEST TRAVEL DOWNWARDS. TWO OF THE CYL''S WERE FACTORY NEW WITH 681 HRS SINCE NEW. THE OTHER TWO WERE REPAIRED 1,176.7 HRS AGO AT FACTORY''S REQUEST BY A FACTORY APPROVED REPAIR FACILITY UNDER WARRANTY. THIS IS 3RD OCCURRENCE IN 1,859.5 HRS SMOH BY LYC. THE 1ST OCCURANCE RESULTED IN ALL OF THE ABOVE AND BELOW ACCEPTABLE COMPRESSIONS ON ALL 4 CYL''S. FACTORY STATES ENGINE IS RUNNING TOO

CESSNA CABLE FRAYED 02/14/2000 4117

170 05101056 TE FLAP 2000041500057

DURING AN ANNUAL INSPECTION, THE OUTBOARD END OF THE RIGHT FLAP CABLE WAS FOUND FRAYED .50 INCH AFT OF THE CLEVIS END.THIS MAY HAVE BEEN CAUSED BY WIND ON THE FLAP FLEXING THE CABLE AT THAT POINT.
SUBMITTER SUGGESTED AGE OF THE CABLE WAS POSSIBLY A FACTOR ALSO.

CESSNA BRACKET BROKEN 03/09/2000 3624

170B 40044 ENGINE MOUNT 2000041500141

BRACKET BROKEN AT THE EDGE OF THE STRAIGHT LINE OF BOLT PAD MACHINED SURFACE. SUBMITTER RECOMMENDED VISUAL INSPECTION EVERY 100 HOURS.

CESSNA LINE LEAKING 02/10/2000 294

172H 3506210 OIL COOLER 2000041200172

LEAKING OIL PRESSURE LINE TO THE OIL COOLER. PREMATURE HOSE FAILURE STARTED OUT AS AN OILY SPOT INSIDE THE COWL ON THERIGHT SIDE AND PROGRESSED TO A STREAK OF OIL DOWN THE BELLY WITH OIL WEEPING OUT THE SIDE WALL OF THE HOSE THE FULL LENGTH. (X)

CESSNA FUEL LINE CHAFED 02/20/2000 2428

172M 050011874 FUSELAGE 2000040500072

AIRCRAFT ACQUIRED FOR USE IN A FLIGHT SCHOOL. DURING ITS INITIAL INSP (ANNUAL), A FUEL LINE WAS FOUND CHAFING HARD AGAINST THE STEERING ROD. THIS FUEL LINE IS LOCATED BETWEEN FUEL SELECTOR VALVE AND FUEL STRAINER AND PASSES UNDER COPILOT''S RUDDER PEDALS. EVERY TIME RUDDER PEDALS WERE MOVED, THE STEERING ROD (CONNECTED TO NOSE WHEEL) RUBBED AGAINST THE FUEL LINE AT A BEND. FUEL LINE WAS CHAFED TO THE POINT WHERE INTERIOR WALL WAS BENT INWARD AND SO THIN THAT FAILURE WAS IMMINENT. IT APPEARED TO HAVE BEEN CHAFING SINCE ACFT WAS BUILT. NEW FUEL LINE CONTACTED STEERING ROD IN SAME MANNER.CORRECTED BY BENDING LINE AWAY FROM STEERING ROD.

CESSNA LYC CARBURETOR CONTAMINATED 02/14/2000 3706

172M O320E2D 55018010 AIRBOX 2000040500032

A ROUGH RUNNING ENGINE, AND A LOSS OF ENGINE POWER (MAXIMUM RPM 2200) CAUSED PILOT TO MAKE A PRECAUTIONARY LANDING. TECHNICIAN INSPECTED THE INDUCTION SYSTEM AND FOUND THE CARBURETOR HEAT AIR VALVE SEAL MATERIAL HAD SEPARATED AND WAS INGESTED BECOMING LODGED ACROSS THE CARBURETOR VENTURI. THIS DISRUPTION OF AIR FLOW THROUGH THE VENTURI CAUSED IMPROPER FUEL/AIR MIXTURE AND FUEL SCHEDULING RESULTING IN A LOSS OF POWER. THIS PART HAD NOT BEEN CHANGED SINCE MANUFACTURE OF AIRCRAFT 25 YEARS AGO. TOTAL TIME ON AIRCRAFT 3,706.0 HOURS. RECOMMENDATION: MORE FREQUENT INSPECTIONS OF CARBURETOR AIR BOX ASSEMBLY FOR WEAR AND DETERIORATION AND TOTAL TIME IN SERVICE. (X)

CESSNA LYC CYLINDER DAMAGED 02/28/2000 832

172M O320E2D LW12416 NR 4 2000042200577

PILOT REPORTED ROUGH RUNNING ENGINE AND LOW RPM. MAINTENANCE FOUND NR 4 CYLINDER HAD EXHAUST VALVE STUCK OPEN, NR 4 CYLINDER PUSH ROD AND HOUSING WERE BENT WITH NO OIL LEAKAGE. THE PISTON WAS NOT DAMAGED AND NO METAL FOUND IN THE ENGINE OIL FILTER. (X)

CESSNA SEAT CRACKED 02/28/2000 2285

172R 05142251 COCKPIT 2000040500002

REFERENCE DRAWING 0514222 (SEAT BACK ASSY, AFT BENCH 172) VIEWING THE -1 SEAT BACK ASSY. AT THE LOWER RIGHT HAND CORNER OF THE SEAT BACK THRE IS A -11 FRAME END THAT WELDS TO THE -4 FRAME UPPER. THE WELD IS APPROXIMATELY 7.30 INCHES UP FROM THE BOTTOM OF THE -11 FRAME END. APPROXIMATELY .75 INCH BELOW THIS WELD JOINT THE SEAT BACK HAS BROKE IN HALF. (X)

CESSNA PIN SHEARED 12/21/1999 654

172R 051701912 RT CREW DOOR 2000041200117

PIN SHEARED. FOUND RT DOOR FORWARD SKIN AT LOWER HINGE AREA IMPROPERLY TRIMMED, EXTENDED TOO FAR FORWARD, CAUSING DOORTO UNDER-LAP FUSELAGE SKIN AT THE HINGE STRESSING HINGE PIN. NOTE: SUBMITTER STATED LOSS OF THIS LOWER HINGE INTEGRITY IN-FLIGHT COULD LEAD TO SEPARATION OF THE DOOR ASSY IMPACTING HORIZ TAIL SURFACES CAUSING LOSS OF CONTROL OF THE ACFT,INJURY AND DEATH. TRIMMED DOOR SKIN, REPLACED PIN, OPS CHECK OK. (X)

CESSNA LYC SPARK PLUG DIRTY 02/17/2000 1062

172R IO360L2A ENGINE 2000040500047

DURING FLIGHT, THE PILOT REPORTED ROUGH ENGINE OPERATION FOR SEVERAL SECONDS. THE SPARK PLUGS WERE SERVICED. (X)

CESSNA LYC SPARK PLUG DIRTY 02/17/2000 1903

172R IO360L2A ENGINE 2000040500048

DURING FLIGHT, PILOT REPORTED ROUGH ENGINE OPERATION FOR A FEW SECONDS. THE INJECTOR NOZZLES WERE CLEANED, THE SPARK PLUGS WERE SERVICED, AND THE ELECTRIC BOOST PUMP WAS REPLACED. (X)

CESSNA LYC FLOW DIVIDER MALFUNCTIONED 02/17/2000

172R IO360L2A ENGINE 2000040500049

DURING FLIGHT, THE PILOT REPORTED ROUGH ENGINE OPERATION FOR A FEW SECONDS. THE FUEL FLOW DIVIDER WAS REPLACED AND THENR 1 NOZZLE WAS REPLACED. (X)

CESSNA LYC PUMP INOPERATIVE 03/16/2000 443

172R IO360L2A 5100003 FUEL BOOST 2000040500093

THE CREW REPORTED THE ELECTRIC BOOST PUMP INOPERABLE. THE PUMP WAS REPLACED. THIS PUMP ROUTINELY FAILS IN THIS FLEET OF 172R AIRCRAFT, AND IN MOST CASES, PRODUCES METAL THAT CONTAMINATED THE FUEL INJECTION COMPONENTS. (X)

CESSNA LYC ENGINE MALFUNCTIONED 03/21/2000 724

172R IO360L2A NOSE 2000040500130

ENGINE RAN ROUGH AND ALMOST SHUT DOWN DURING DESCENT. (X)

CESSNA LYC FLOW DIVIDER MALFUNCTIONED 02/15/2000 6011

172R IO360L2A FUEL SYSTEM 2000040800265 140

ENGINE HAD MOMENTARY ROUGHNESS WHILE IN CRUISE FLIGHT. REPLACED FUEL FLOW DIVIDER, FUEL SERVO, AND ELECTRIC BOOST PUMP. (X)

CESSNA LYC ENGINE ROUGH 03/12/2000

172R IO360L2A NOSE 2000040800301

THE ENGINE WAS REPORTED ROUGH IN CRUISE. CORRECTIVE ACTION WAS TAKEN AND THE AIRCRAFT WAS RETURNED TO SERVICE. (X)

CESSNA LYC ENGINE MALFUNCTIONED 03/07/2000 1402

172R IO360L2A NOSE 2000041200064

WHILE IN THE PATTERN ON A DUAL FLIGHT, THE ENGINE BEGAN TO RUN ROUGH ON THE CROSS-WIND LEG. IT CONTINUED DOING SO ON DOWN-WIND. AN EMERGENCY WAS DECLARED AND A SUCCESSFUL LANDING WAS MADE. (X)

CESSNA PLUNGER MALFUNCTIONED 03/30/2000

177RG 204101738 LT MLG SOLENOID 2000040500015

WHEN THE GEAR WAS RETRACTED, THE SOLENOID PLUNGER EXTENSION WAS NOT PULLING THE DOWNLOCK MECHANISM COMPLETELY OPEN. WHEN THE GEAR WAS THEN EXTENDED AND THE GEAR HIT THE DOWNLOCK MECHANISM, IT WOULD DRIVE IT OVERCENTER BACKWARDS. REPLACING WORN PARTS FIXED THE PROBLEM. (X)

CESSNA CONT CYLINDER WORN 02/21/2000 765

182P O470U 654960A1 NR 3 2000041200144

DURING A ROUTINE COMPRESSION CHECK, THE NR 3 CYLINDER WAS FOUND TO HAVE EXCESSIVE LEAKAGE 53/80 PAST THE PISTON RINGS.THE REMOVED CYLINDER WAS FOUND WORN OUT AT THE TOP OF THE CYLINDER. (X)

CESSNA CONT LIFTER DAMAGED 02/21/2000 1230

182P O470U 653877 NR 3 CYLINDER 2000041200145

DURING THE REMOVAL OF THE NR 3 CYLINDER, THE EXHAUST VALVE LIFTER WAS INSPECTED AND FOUND TO HAVE CHIPS OF MATERIAL MISSING FROM THE CORNERS NEAR THE LOWER FACE. THE FACE OF THE LIFTER AND CAM LOBE WERE NOT FOUND TO HAVE ANY DEFECTS. (X)

CESSNA CONT POINTS SHORTED 12/20/1999

182Q O470U S6RN1225 RT MAGNETO 2000040800041

AFTER UNDERGOING A 500-HOUR MANDATORY AD INSPECTION, THESE MAGNETOS WERE RETURNED TO CUSTOMER RE-INSTALLED AND TIMED TOENGINE PER MFG SPECS. ACFT WENT THROUGH A NORMAL PRE-FLIGHT AND RUN-UP, THEN FLOWN FOR 1 HR AT NORMAL CRUISE. IN THISLENGTH OF TIME, THE EGT STARTED RISING ALONG WITH ENG ROUGHNESS. AFTER RETURN TRIP AND RECHECK MADE, FOUND RT MAG SHORTED AND POINTS CLOSED. THE LT MAG TIMING WAS ADVANCED BEYOND MFG''S SPECS. DETERMINED BOTH FELT PADS HAD COME LOOSE AND ALLOWED POINTS TO CLOSE. MAGS WERE RETURNED TO CUSTOMER, YELLOW TAGGED, AND TORQUE SEALED. (X)

CESSNA CONT POINTS OUT OF 12/20/1999

182Q O470U S6RN1225 LT MAGNETO 2000040800042

AFTER UNDERGOING A 500-HOUR MANDATORY AD INSPECTION, THESE MAGNETOS WERE RETURNED TO CUSTOMER RE-INSTALLED AND TIMED TOENGINE PER MFG SPECS. ACFT WENT THROUGH A NORMAL PRE-FLIGHT AND RUN-UP, THEN FLOWN FOR 1 HR AT NORMAL CRUISE. IN THISLENGTH OF TIME, THE EGT STARTED RISING ALONG WITH ENG ROUGHNESS. AFTER RETURN TRIP AND RECHECK MADE, FOUND RT MAG SHORTED AND POINTS CLOSED. LT MAG TIMING WAS ADVANCED BEYOND MFG''S SPECS. DETERMINED BOTH FELT PADS HAD COME LOOSE AND ALLOWED POINTS TO CLOSE. MAGS WERE RETURNED TO CUSTOMER, YELLOW TAGGED, AND TORQUE SEALED. (X)

CESSNA CONT BENDIX STUD BROKEN 01/20/2000 10

182Q O470U ENGINE CYLINDER 2000040800302

NEW REBUILT ENGINE PURCHASED FROM CONTINENTAL. 10.6 HOURS AFTER INSTALLATION, NR 4 CYLINDER, NR 2 AND NR 3 CYLINDER MOUNTING STUDS BROKE. NR 5 AND NR 6 MISSING NUTS. (TORQUE WAS CHECKED ON ALL OTHER CYLINDERS AND FOUND OK). SAME ENGINE UPON INSTALLATION REQUIRED THE REPLACMENT OF THE RIGHT

CESSNA CONT SNAP RING SEPARATED 03/28/2000

182Q O470U B4426 HUB 2000042200695

INSTALLED OVERHAULED PROPELLER. FLIGHT TEST PERFORMED, ABOUT 20 MINUTES LATER, FELT SLIGHT VIBRATION. LANDED FOR CAUSE AND FOUND SNAP RING AND SHIMS OUT OF HUB ON BLADE SHANK. PROPELLER TSO:

CESSNA SERVO WORN 03/01/2000

182S KS271C LE FLAP 2000041200206

WHILE PERFORMING A SERVICE BULLETIN ON PRIMARY SERVO (SB KS271C-5 ALERT NOTED THE SERVO GEAR TEETH TO HAVE EXCESSIVE WEAR. GEAR BEARING APPEARS TO BE MAKING METAL. THERE WAS A BLACKISH METAL POWDER RESIDUE UNDER THE GEAR. WHEN THE GEAR IS TURNED BY HAND IT DOES NOT ROTATE SMOOTHLY AND MAKES A SLIGHT GRINDING NOISE. ACFT TOTAL TIME: 325 HOURS. (TIM ANDPITCH SERVOS NORMAL). (X)

CESSNA SERVO WORN 02/20/2000

182S KS271C RT WING 2000042200633

WHILE PERFORMING A SERVICE BULLETIN ON A PRIMARY SERVO (SB KS271C-5 ALERT) NOTED THE SERVO GEAR TEETH TO HAVE EXCESSIVEWEAR. GEAR BEARING APPEARS TO BE MAKING METAL. MEAL POWDER RESIN VISIBLE UNDER THE GEAR. GEAR ROTATION IS NOT SMOOTHAND MAKES A SLIGHT GRINDING SOUND. ACFT TOTAL TIME: 390 HOURS.
PITCH AND TRIM SERVOS OK. (X)

CESSNA SEAL LEAKING 02/18/2000 97

206H 17160081 FUEL SYSTEM 2000042200457

DURING INITIAL 100-HOUR INSPECTION ON A NEW CESSNA 206H, FUEL WS FOUND LEAKING FROM THE RIGHT SIDE FUEL SENDER SCREWS.INSPECTION REVEALED LEAK EMANATING FROM IMPROPERLY SEALED NUT RING. AFTER REMOVAL, INSPECTION REVEALED TWO VOIDS BETWEEN NUT RING AND RIB. EXAMINATION OF AREA REVEALED AN UNKNOWN WHITE POWDERY SUBSTANCE IN THE VOID WHERE SEALANT WAS OMITTED. POSSIBLE CAUSE WAS IMPROPER SEALING TECHNIQUES DURING THE AIRCRAFT''S MANUFACTURING PROCESS. (X)

CESSNA SPROCKET MISMANUFACTURE 02/19/2000

207A 12606323 RUDDER TRIM 2000041500559

AFTER INSTALLATION OF PART, OPS CHECK FOUND TRIM CHAIN TO RIDE NORMALLY FOR TWO-THIRDS OF TURN ON SPACER BEFORE RIDING UPON TEETH OF SPROCKET AND JUMPING OFF. INSPECTED SPROCKET AND DETERMINED SOME OF THE TEETH MISS-CUT UPON MANUFACTURE.

CESSNA STARTER MISREPAIRED 03/27/2000

207A 6462751 ENGINE 2000041500560 17

UPON DISASSEMBLY OF STARTER, INCORRECT PRESTOLITE BRUSHES, PN MDL-1063B, WERE FOUND INSTALLED. THE STARTER IS TCM, BUTTHE BRUSHES ARE PRESTOLITE. TCM BRUSHES ARE .50 INCH LONG. PRESTOLITE BRUSHES ARE

CESSNA SEAT TRACK MISINSTALLED 02/17/2000

210L 1210520 FUSELAGE 2000040500030

DURING AIRCRAFT INSPECTION, FOUND SEAT TRACKS NOT FASTENED TO AIRCRAFT STRUCTURE BELOW FLOOR AND IMPROPER FASTENERS SECURING SEAT TRACKS. CONTACTED CESSNA TECH SUPPORT TO OBTAIN PROPER INSTALLATION INSTRUCTIONS AND REINSTALLED SEAT TRACKSPROPERLY. SEAT TRACKS ARE MAJOR STRUCTURE AND NEED TO BE INSTALLED PROPERLY FOR CRUSHWORTHINESS. (X)

CESSNA CONT BEARING CRAZED 02/15/2000

210L IO520* 630826 CRANKSHAFT 2000040500034

DURING ENGINE TEAR DOWN DUE TO SUDDEN STOPPAGE. INSPECTION OF THE BEARINGS FOUND 7 OUT OF 12 BEARING HALVES FOUND WITHEXCESSIVE CRAZING ON THE SURFACE. ENGINE WAS ASSEMBLED 12-28-99 AND PUT INTO SERVICE ON 1-29-00 AND WAS DISASSEMBLED 2-25-00. SUBMITTER STATED CAUSE AND PREVENTION UNKNOWN. (X)

CESSNA CONT BEARING DAMAGED 02/15/2000 45

210L IO520L 653547 CRANKSHAFT 2000040500035

DURING ENGINE TEAR DOWN DUE TO SUDDEN STOPPAGE, INSPECTION OF THE BEARINGS FOUND 4 OUT OF 10 BEARING HALVES WERE FOUND WITH EXCESSIVE CRACKING ON THE SURFACE. ENGINE WAS ASSEMBLED 12-28-99, AND PUT INTO SERVICE ON 1-29-00, AND WAS DISASSEMBLED 2-25-00. CAUSE AND PREVENTION UNKNOWN. (X)

CESSNA TORQUE TUBE BROKEN 01/31/2000 3220

310 081330031 MLG 2000041200175

PART FAILED AT GEAR RETRACTION AFTER TAKEOFF, NOSE GEAR COLLAPSED AT LANDING. COMPONENT WAS REDESIGNED STARTING WITH A/C SN 35042. SUBMITTER SUGGESTED ADDED EMPHASIS INSPECTION THIS AREA ON

CESSNA WHEEL DAMAGED 03/03/2000 1830

336 4075 MLG 2000040800300

BOLTS BENT WHEEL HOLES ELONGATED DUE TO WEIGHT OF AIRCRAFT AND SHORT FIELD LANDINGS. AIRCRAFT USED FOR SEARCH AND RESCUE PLUS TRAINING IN FRESNO COUNTY SHERIFF''S AIR SQUADRON. NOTE: WHEEL STATIC LOAD 1,800 POUNDS. (X)

CESSNA BUSS FAILED 04/12/2000 2700

340A COCKPIT 2000041500486

AIRCRAFT LOST AVIONICS POWER, EMERGENCY AVIONICS ALSO INOPERABLE. VFR FLIGHT OUTSIDE OF CLASS B OR CLASS C AIRSPACE. CAUSED BY THE BUS BAR CHAFING THROUGH AT CHAFE STRP ON A/C STRUCTURE AND SHORTING OUT. BUS BAR WAS .25 INCH LONGER THANADJACENT BARS CAUSING IT TO BEAR AGAINST THE STRUCTURE. BUS BAR WAS TRIMMED FOR ADDITIONAL CLEARANCE AND NEW CHAFE MATERIAL INSTALLED. (X)

CESSNA TRUNNION DAMAGED 01/26/2000

340CESSNA 509400111 MLG 2000041500055

DURING THE LANDING PHASE OF THE FLIGHT AFTER TOUCHDOWN, THE AIRCRAFT DIPPED AND VEERED HARD TO THE LEFT. EXAMINATION OF THE AIRCRAFT REVEALED A POSSIBLE CAUSE WAS A FAILURE OF THE BELLCRANK ATTACHMENT POINT OF THE MAIN LANDING GEAR TRUNNION ASSEMBLY.

CESSNA MCAULY HUB CRACKED 02/07/2000

401A BLADE SOCKET 2000040800130 359

PROPELLER HUB CRACKED IN THE BLADE SOCKET AREA.

CESSNA RESISTOR FAILED 12/13/1999 4

402C HL5508Z HEATER FAN 2000040800257

CREW TURNED ON HEATER PRIOR TO DEPARTURE FROM HYA. ON CLIMB-OUT, PILOT NOTICED FUNNY SMELL, TURNED OFF HEATER. PASSENGERS INFORMED CREW OF SMOKE IN CABIN. RETURNED TO HYA FOR UNEVENTFUL LANDING. MAINTENANCE FOUND HEATER FAN DROP RESISTOR BURNED. REMOVED AND REPLACED ASSY, HEATER FAN SYSTEM CHECKS OK. RELEASED AIRCRAFT BACK TO SERVICE. (X)

CESSNA CONT MCAULY SHAFT CRACKED 02/28/2000

404 GTSIO520M D20594 PROP GOVERNOR 2000041200180

CRACK INDICATION. (X)

CESSNA CONT CRANKCASE CRACKED 03/06/2000

414 TSIO520NB 11577L ENGINE 2000041200093 881

CRANKCASE CRACKED FROM BASE OF NR 4 CYLINDER ACROSS THE TOP OF THE BACKBONE TO THE BASE OF NR 3 CYLINDER. CAUSE UNKNOWN AT THIS TIME. (X)

CESSNA ACTUATOR INOPERATIVE 11/09/1999

414A NLG 2000040800033

NOSE GEAR COLLAPSED ON LANDING CAUSING DAMAGE TO BOTH PROPS, ENGS, AND NOSE STRUCTURE DAMAGE TO BOTTOM OF ACFT FROM RADAR DOME TO BS 43.0. NOSE OF THE ACFT WAS PLACED ON A JACK. NOSE GEAR ACTUATOR WAS LOCKED DOWN. THERE WAS NO PHYSICAL DAMAGE TO NOSE GEAR UNLOCKING OF LOCKING SYS. NOSE GEAR ACTUATOR P/N 9910139-3 REPLACED WITH A SERVICEABLE ACTUATOR. THE SUSPECT ACTUATOR SENT FOR TEAR DOWN ANALYSIS. FOUND HYD FLUID CONTAMINATED WITH WATER. UNLOCKING PRESS 750 PSIG; NORMAL ULOCKING PRESS 250-400 PSIG. THIS CAUSED BY LARGE AMTS OF DIRT AND GRIME ON LOCKING RAM P/N 15211906-5. PART HAS TO BE ABLE TO SHIFT FREELY. ENGS AND PROPS REPLACED. DAMAGE TO NOSE STRUCTURE REPAIRED.

CESSNA BALL JOINT FAILED 02/25/2000 100

414A S29991 MIXTURE 2000040800081

THIS BALL JOINT IS THE CONNECTION BETWEEN THE MIXTURE CABLE AND THE THROTTLE ASSY. WHEN THIS JOINT FAILS THERE IS NO MIXTURE CONTROL. SUBMITTER STATED THIS IS SECOND NEW BALL JOINT SEEN FAIL WITH VERY FEW HRS ON THE PART. SUBMITTER SUSPECTED NEW PART USED TO REPLACE THIS DEFECTIVE ONE WILL FAIL PREMATURELY ALSO. THIS COULD BE A SERIOUS PROBLEM. (X)

CESSNA CESSNA CASTING FAILED 01/04/2000 5500

414A 08127358 COCKPIT SEAT 2000040800082

THE CAPTAIN HAD BOTH ENGINES RUNNING AT THE FBO WITH PARKING BRAKE SET. HE LEANED BACK IN HIS SEAT TO GET READY TO DEPART AND THE CASTING BROKE LANDING HIM FLAT ON HIS BACK, STRAPPED INTO THE SEAT WITH HIS PASSENGER IN THE CABIN. HE WAS UNABLE TO REACH THE PEDALS, YOKE, THROTTLES, WHEN PURCHASING A NEW PART AT THE CESSNA DISTRIBUTOR, THEY INDICATED THEY RECENTLY WENT THROUGH 5 OF THESE. THE PART IS CAST AND CONTAINED A FLAW/POROSITY NOTED BY DISCOLORING INSIDE THE CASTING. (X)

CESSNA ACTUATOR CONTAMINATED 01/05/1999

414A 99101363 MLG 2000040800258

PILOT REPORTED RT GEAR DOWN LIGHT DID NOT COME ON IMMEDIATELY AFTER FLIGHT IN SUBFREEZING TEMP. A BANGING NOISE WAS HEARD BEFORE LIGHT CAME ON. AFTER LANDING, ACFT WAS PARKED FOR SEVERAL HRS IN SUBFREEZING TEMPS AND AT PRE-FLIGHT, RT GEAR DOWN LIGHT WAS OUT AND GEAR WARNING LIGHT WAS ON. ACFT WAS DELIVERED TO MAINT IN ABOVE FREEZING TEMPS AND GEAR OPERATION WAS NORMAL ON JACKS WITH HYD MULE. ACTUATOR REMOVED AND EMPTIED OF FLUID. APPROX 1/4 TO 2/3 CUP OF WATER WAS REMOVED WITH MIL-H-5606 FLUID. INVEST SHOWED HYD RESERVOIR SERVICE PORT ON OUTSIDE OF NOSE BAGGAGE BAY WAS MISSING
ITS ORIG SEAL. SUBMITTER SUSPECTED WATER FROZE IN ACTUATOR AND FORCED INTERNAL DOWNLOCK TO

CESSNA SHUTOFF VALVE FAILED 03/04/2000 10

414A AHE85D421 HEATER 2000040800259

VALVE WILL NOT SHUT OFF THE FUEL TO THE HEATER AND CAUSED HEATER TO OVERHEAT. (X)

CESSNA CONT STUD FAILED 03/06/2000 628

421 GTSIO520N NR 5 CYLINDER 2000040800030

DURING INSPECTION OF OIL LEAK, FOUND NR 5 CYLINDER BASE FRONT LOWER MOUNT STUD BROKEN. POSSIBLY, THE STUD WAS HARD ANDBROKE UNDER STRESS. (X)

CESSNA BRAKE ASSY DAMAGED 01/27/2000

421B MLG 2000041500188

ON LANDING, RT SCISSOR ASSY SEPARATED WHEN BRAKE HOSE CLAMP BROKE, BUSHING AND BOLT PULLED THROUGH SCISSOR ASSY. RE-ASSEMBLED SCISSOR ASSY WITH NEW BUSHING AND HOSE CLAMP, INSTALLED WASHERS ON BOLT AND NUT SIDE OF SCISSORS TO PREVENT THISPROBLEM. THE WASHER ON THE NUT, HOSE CLAMP SIDE OF SCISSORS NOT INSTALLED. (X)

CESSNA CONT STUD FAILED 03/06/2000 128

421C GTSIO520N ENGINE 2000040800032

DURING NORMAL ENGINE OPERATION, NOTICED OIL LEAK ON FRONT OF ENGINE. AFTER CLEANING AND INSPECTION, FOUND THE FRONT THROUGH-STUD BROKEN. POSSIBLE CAUSE COULD BE IMPROPER HARDENING OF THE BOLT. (X)

CESSNA TUBE CRACKED 02/24/2000 2467

525 631700348 HYD SYSTEM 2000040500092

AFTER LANDING GEAR RETRACTION, BOTH HYDRAULIC FLOW AND LOW PRESSURE ANNUNCIATOR LIGHTS ILLUMINATED. FLIGHT WAS ABORTEDAND DIVERTED BACK TO PHF (ORIGINATING AIRPORT). LANDING GEAR WAS EXTENDED BY THE EMERGENCY EXTENSION SYSTEM WITH NO FURTHER ABNORMALTIES. MAIN SYSTEM HYDRAULIC FAILURE AS A RESULT OF CRACKED PRESSURE SUPPLY TUBE, PN 6317003-48, TO LOADING VALVE (BYPASS VALVE). FAILED TUBES REPLACED WITH FACTORY-NEW PARTS. LANDINGS: 3,710.

CESSNA LINK BENT 03/13/2000 6135

550 C419175 PEDESTAL 2000040500036

AIRCRAFT''S PITCH TRIM JAMMED IN-FLIGHT AND A SUCCESSFUL LANDING WAS MADE. UPON INSPECTION, MECHANICS FOUND THE SAFETYCLIP THAT HOLDS TH MASTER LINK TOGETHER CAME OFF AND THEN BENT THE MASTER LINK. THE MASTER LINK IS PART OF A CHAIN ASSY LOCATED IN THE PEDESTAL OF THE COCKPIT TRANSFERRING THE MOTION OF THE ELEVATOR TRIM WHEEL TO TEH CABLE SYSTEM. THE CHAIN ASSY WAS REPLACED AND SYSTEM WORKED FINE. SUBMITTER STATED SPECIAL ATTENTION SHOULD BE ADDRESSED TO THE MASTER LINKON PHASE 5

CESSNA ANTENNA MISINSTALLED 02/04/2000 2941

550 DMQ181A ELT 2000040800264

ELT ANTENNA FOUND BROKEN OFF. DISCOVERED THAT AN ANTENNA DESIGNED FOR UNDER 250 MPH WAS INSTALLED. WHEN INSTALLLING ANTENNAS CARE MUST BE TAKEN TO ENSURE THE CORRECT SPEED CAPABILITIES ARE MAINTAINED. THIS ANTENNA WAS MOUNTED AFT OF THEENGINE INLET SO NO ADDITIONAL DAMAGE WAS

CESSNA UPLOCK DAMAGED 03/16/2000

550 554110313 LT MLG 2000041500247

CUSTOMER STATED HE REPLACED LT MLG UPLOCK HOOK DUE TO EXCESS PLAY AT ATTACH BOLT/SPACER AREA. MAINT FACILITY CONDUCTEDPHASE-5 INSP AND ADD''L WORK. DURING L/G EXTEND/RETRACT TEST NOTED DURING EXT CYCLE, NOSE AND RT MLG EXTENDED NORMALLY, BUT LT FREE FELL. AFTER T/S, FOUND PRESS TO UPLOCK CYL, BUT NO PRESS AT OUTSIDE WHICH GOES TO DOWN SIDE OF MLG ACTUATOR. FOUND IF CLEVIS PIN WAS REMOVED FROM LINKAGE, THAT CONNECTS UPLOCK ACT TO HOOK, LT GEAR ACT EXTENDED NORMALLY. NOTIFIED CESSNA UPLOCK HOOK WAS CONTACTING RADIUS OF SUPPORT BRACKET. CESSNA BELIEVED CAUSE WAS A RADIUS CUT WAS ELIMINATED DURING MFG. SUPPORT HAD GOUGE WHERE HOOK CONTACTED IT AND CESSNA REQUESTED BOTH HOOK

CESSNA CHAIN SEPARATED 02/07/2000 225

550 C419175 ELEVATOR 2000041500325

UPON DESCENT INTO FCM, PILOT REPORTED ELECTRIC ELEVATOR TRIM WAS UNRESPONSIVE. PILOT ATTEMPTED TO HAND TRIM THE AIRCRAFT AND FOUND MANUAL TRIM WHEEL FREE TO TURN WITH NO RESISTANCE. CREW FOUND ELEVATOR CONTROL HEAVY AND HARD TO MOVE. THE PILOTS ELECTED TO DIVERT INTO MSP. INVESTIGATION INTO THE CAUSE REVEALED THE TRIM CABLE FORWARD ATTACH CHAIN MASTER LINK HAD BECOME DISCONNECTED AND WAS FOUND IN THE BELLY OF THE AIRCRAFT ALONG WITH THE ATTACHING HARDWARE AND THE TRIM CABLES. NO OTHER DISCREPANCIES WERE FOUND WITH THE SYSTEM. (X)

CESSNA CONTROL BOX FAILED 04/13/2000 2545

560CESSNA HYTROL7K3427 99123056 ANTI-SKID SYSTEM 2000042200455

DURING TAH, PRIOR TO TAKEOFF, FOOT BRAKES APPLIED, NO BRAKING ACTION TOOK PLACE. BRAKE SYS PRE-SELECTED TO THE ATTACHED MODE. INVEST REVEALED WITH ANTI-SKID SELECTED THE FAULT LIGHT WAS OUT WITH BRAKES APPLIED. INITIALLY, BRAKES WENT ON, BUT RELEASED AND STAYED RELEASED. APPEARS ANTI-SKID CONTROL BOX FAILED WITH BRAKE VALVES IN OPEN POSITION. BRAKE ANTI-SKID CONTROL BOX, PN 9912305-6, SN 847, WAS REMOVED. RECORDS SHOWS ORIG INSTALL 12-93, ACFT BUILD DATE. A TEST OF INDICATION SYS FOR ANTI-SKID SHOWED SWITCH ON-LIGHT OUT, BUT ON REPLACEMENT PART, SWITCH ON-LIGHT OUT-LIGHT ON-LIGHT

CESSNA HOSE DISINTEGRATED 12/16/1999 510

A185F B904 AND B906 COCKPIT 2000040800126

FOUND HOSE .3750 INCH AND .25 INCH (AS REQUIRED BY SUCTION SYSTEM/INSTRUMENTS) TO HAVE ITS RED INNER SLEEVE COMPONENT DISINTEGRATED AND HOSE BLOCKED. SECTIONS OF BLACK OUTER SLEEVE WOULD ALSO DISINTEGRATE ON CONTACT. ORIG CAUSE FOR INVEST WAS VARIOUS SUCTION DISCREPANCIES INCLUDING SUCTION INST INOP. POSSIBLE CAUSE, HOSE IS OF POOR QUALITY THAT IT WILL NOT STAND UP TO AGE. TO PREVENT RECURRENCE, ALL HOSE OF THIS TYPE SHOULD BE REPLACED UNLESS HOSE CAN BE TRACED TO A BAD BATCH USED ON SPECIFIC S/N OR NUMBER RANGES. FOUND NO SIGNS OF EXTERNAL IMPETUS TO SUSPECT A CAUSE OF EARLY DECAY SUCH AS PETROLEUM PRODUCTS, HEAT OR ULTRA VIOLET RAYS (ALL HOSES UNDER INST PANEL).(X)

CESSNA CONT BRACKET BROKEN 02/14/2000 9884

A185F IO520D 0512128 BS 65.33 2000041500059

RIGHT FLAP RETRACTED AFTER PILOT SELECTED FIRST NOTCH OF FLAPS. FOUND INBOARD MOUNTING EARS BROKEN AWAY FROM PULLEY BRACKET LOCATED JUST AFT OF FLAP HANDLE. SUBMITTER STATED THIS IS THIRD BRACKET REPLACED IN FLEET OF THREE A185F'S.

CESSNA BLADE MISOVERHAULED 03/01/2000 3607

P210N PROPELLER 2000040800303 115

PROPELLER VIBRATING AFTER RECENT OVERHAUL. DYNAMIC BALANCING HELPED. FOUND 7 AN 97-3 WASHERS FOR DYNAMIC BALANCE ADDED 6 MORE TO BRING BALANCE TO A 1 IPS. ALSO FOUND 6 STATIC WEIGHTS IN SAME LOCATION. REMOVED PROP FROM AIRCRAFT TO CHECK STATIC BALANCE. COULD NOT. MEASURED BLADES AT 30.25 INCHES, 33.25 INCHES, AND 36.25 INCHES STA. FOUND ALL 3 BLADES UNDER MINIMUM WIDTH AT 30.25 INCHES STA. BLADE NR 1, 5,803, NR 2 5,775, NR 3, 5,820 (MIN AT 30.25 INCHES IS 5.825. (X)

CESSNA PIN LOOSE 08/18/1999 3435

R182 12802091 DOWNLOCK 2000040800038

WHILE PERFORMING RECURRENT INSP OF NOSE GEAR DOWNLOCK PINS LOCATED IN ACTUATOR BEARING END, FOUND DOWNLOCK PINS IN AN UNAIRWORTY CONDITION. LT PIN LOOSE AND ROTATING FREELY, RT PIN BROKEN WITH ITS WORKING END WIGGLING FREE, FITTED END STILL SEATED. FOUND NG DRAG LINK (ACTUATOR) ATTACH BRACKET PN 2243309-4 CRACKED THRU ONE OF THE UPPER RIVET HOLES. WHILE REMOVING CRACKED DRAG LINK BRACKET, INSP REVEALED CRACKS IN SHEET METAL. NG ACT MODIFIED, SEB 95-20, BY USING CESSNA ACT PIN SERVICE KIT NR SK210-115. MODIFIED NG ACT RE-INSTALLED ON ACFT USING NEW (NAS464P7-36) BOLT. OPER CHECK, RIGGING, AND FINAL INSP OF NG ACT PERFORMED WITH NO FURTHER DISCOVERY OF FAILURES. (X)

CESSNA LYC BENDIX CAPACITOR FAILED 03/08/2000 35

R182 O540L3C5 66E21576 10382681(H) MAGNETO 2000041500558

NEW CAPACITOR INSTALLED TO SATISFY TCM CSB662A FAILED ON FIRST ENGINE RUN AFTER INSTALLATION. DATE CODE ON FAILED CAPACITOR IS 00-08. FAILURE WAS INTERMITTENT DURING 15 MINUTE ENGINE RUN-UP.

CESSNA HOSE BURNED 01/14/2000 24

T206H AE366303760274 TURBOCHARGER

2000040800031

SCAVENGE OIL HOSE TO TURBOCHARGER BURNED UP BY EXHAUST PIPE. USED ALTERNATE ROUTE TO BYPASS EXHAUSE PIPE. (X)

CESSNA CONT SLICK IMPULSE FAILED 02/26/2000

U206F IO520F 6310 M3050 MAGNETO 2000041500561

THE IMPULSE COUPLING ENGAGES ONLY 1 OUT OF 5 TIMES WHEN PROPELLER IS TURNED BY HAND. THE SPRING WHICH HOLDS THE PAWL OUT TO ENGAGE IMPULSE COUPLING HAS NOT BROKEN BUT HAS TOTALY LOST ITS SPRING

CNDAIR FITTING CRACKED 03/02/2000 7950

CL6001A11 MS21905 HYDRAULIC LINE 2000041500563

IN THE LAST 2 MONTHS HAVE FOUND 3 T-FITTINGS CRACKED AND LEAKING. (TWO ON 600 CHALLENGER, ONE ON 601). ONE DID CAUSEAN INTERRUPTION OF A FLIGHT. ALL THREE ARE ALUMINUM FITTINGS THAT HAD NOT BEEN DISTURBED SINCE MANUFACTURE.

CNDAIR FITTING CRACKED 03/02/2000 4290

CL6002B16 MS21905 HYDRAULIC LINE 2000041500053

IN THE LAST 2 MONTHS HAVE FOUND 3 T-FITTINGS CRACKED AND LEAKING. (TWO ON 600 CHALLENGER, ONE ON 601). ONE DID CAUSEAN INTERRUPTION OF A FLIGHT. ALL THREE ARE ALUMINUM FITTINGS THAT HAD NOT BEEN DISTURBED SINCE MANUFACTURE.

CNDAIR SEAL LEAKING 02/25/2000 1451

CL6002B19 7010FS9545708 BRAKE ASSY 2000040800016

BRAKE ASSY, PN 5010520-1, FAILED PREMATURELY. ONE EACH PISTON LEAKING FROM INSULATOR AREA. PISTON INTERNALLY FILLED WITH FLUID. EVIDENCE OF T-SEAL FAILURE. THIS IS A CONTINUAL DISCREPANCY. FACTORY NEW BRAKE ASSY. NOTE: OEM PARTS INSTALLED IN BRAKE ASSY AND THE MOST RECENT BRAKE CONFIGURATION, PN

DIAMON AXLE CRACKED 03/14/2000 3030

DA20A1 2082100701 RT MLG WHEEL 2000042200282

DURING WALK-AROUND, INSTRUCTOR NOTICED CRACK ON TOP OF AXLE FLANGE BOLT THROUGH-HOLE. SUSPECT CRACK FORMED BY STRESS CORROSION. SUBMITTER RECOMMENDED AXLE BE REPLACED AT 2,000-HR OR REPLACE ANODIZED ALUMINUM WITH ONE MADE OF STEEL JUST LIKE THE MATING SURFACE OF GEAR LEG. (X)

DORNER PWA BLADE CRACKED 04/04/2000

DO328100 PW119B C60661 PROPELLER 2000042200725

DURING SEARCH INSPECTION, 4 EACH C-6066-1 PRELOAD PLATES WERE FOUND CRACKED. (X)

DORNER PWA BUSHING BROKEN 04/05/2000

DO328100 PW119B A4959 HUB 2000042200726

DURING SEARCH INSPECTION, FOUND THE A-4659 VESPEL BUSHING WAS MISSING FROM THE HUB PITCH CHANGE ROD BORE. FRAGMENTS OFTHE BUSHING WERE FOUND IN THE HUB ASSEMBLY. (X)

DORNER PWA PLATE CRACKED 04/04/2000

DO328100 PW119B C60661 PROPELLER BLADE 2000042200845 2161

DURING SEARCH INSPECTION, 4 EACH C-6066-1 PRELOAD PLATES WERE FOUND CRACKED. ONE EACH PRELOAD PLATE WAS CRACKED IN SUCH A MANNER THAT IT BROKE DURING INSPECTION. TIME SINCE LAST INSPECTION: 2,160:30

DOUG FIREWALL CHAFED 02/01/2000

600N ENGINE BAY 2000040800040

AFTER REMOVING THE ENGINE FOR FOD, NOTICED THERE WERE TWO RUBBED INDENTATIONS TO THE UPPER LEFT PORTION OF THE FIREWALL. UPON FURTHER INVESTIGATION, NOTED THE BLEED VALVE BOLT HEADS WERE WORN CONSIDERABLY. THIS WAS THE ORIGINAL FACTORY INSTALLATION. (X)

EMB BFGOODRICH STATOR BROKEN 03/13/2000

EMB120 1331096 BRAKE ASSY 2000040500055

BRAKE ASSY, PN 2-1585, FAILED PREMATURELY. NR 1 STATOR BROKEN AND BINDING IN TORQUE TUBE KEY SLOTS. THIS IS A CONTINUAL DISCREPANCY. BRAKE ASSY SHOULD LAST 2,500 CYCLES. NOTE: OEM PARTS INSTALLED IN BRAKE ASSY AND THE MOST RECENT BRAKE CONFIGURATION, PN 2-1585. (X)

EMB FRAME CRACKED 01/14/2000

EMB120RT 12003851002 RT NACELLE 2000040800136

RIGHT NACELLE FRAME 1 CRACKED OUTBOARD OF TORQUE MOUNT. ENGINE VIBRATION/TORSION. SB 120-54-0036 IS BEING INCORPORATED. (X)

EMB FRAME CRACKED 01/14/2000

EMB120RT 12003851001 LT NACELLE 2000040800137

LEFT NACELLE FRAME 1 CRACKED OUTBOARD OF TORQUE MOUNT. ENGINE VIBRATION/TORSION. SB 120-54-0036 IS BEING INCORPORATED. (X)

EMB FRAME CRACKED 02/22/2000 22739

EMB120RT RT NACELLE 2000042200160

RIGHT NACELLE NR 1 FRAME CRACKED AT THE ENGINE TORQUE TUBE MOUNT AREA. ENGINE VIBRATION IS A POSSIBLE CAUSE. FRAME ISBEING REPLACED WITH 4 EACH NEW FRAMES, P/N 120-540036-004, WHICH HAS A ''BEEFED'' UP WEB AREA AT THE MOUNTING POINT. (X)

GULSTM BOLT CRACKED 02/03/2000

114ARKWELL AN423A MLG 2000040500006

UPON LANDING AIRCRAFT, PILOT NOTED RT MAIN LANDING GEAR FELT MUSHY. VISUAL INSPECTION OF PARKED AIRCRAFT YIELDED THE RT MAIN LANDING GEAR FORWARD TRUNNION BOLT WASHER AND NUT WERE MISSING DUE TO THE BOLT SHEARING. AS A PREVENTATIVE MEASURE, THE LT SIDE BOLT WAS REMOVED AND FOUND SIGNS OF EXTREME WEAR, AND WAS REPLACED. CURRENTLY, THERE ARE NO AIRWORTHINESS DIRECTIVES OR SERVICE BULLETINS ADDRESSING THIS BOLT. SUBMITTER STATED THIS BOLT SHOULD BE A TIME REPLACEMENT PART OF 3-5

GULSTM VALVE LOOSE 03/03/2000 3648

GIV 573801 FLAP ACTUATOR 2000042200159

FLAP ACTUATION SLUGGISH WITH ENGINE RUNNING. WOULD NOT OPERATE USING AUXILIARY SYSTEM. FOUND FLAP SELECTOR VALVE INTERNAL SPOOL ACCESS CAP HAD NEVER BEEN SAFETIED (NO SAFETY WIRE MARKS ON UNIT) AND HAD BACKED OUT 3 TURNS. REPLACED SELECTOR VALVE (REPLACEMENT UNIT WAS SAFETIED WITH LEAD SEAL).
OPERATION NORMAL. (X)

HUGHES SEAT BROKEN 03/07/2000

369D 369H6525503 COCKPIT 2000041500019

BOTTOM OF SEAT IS BROKEN.

HUGHES INDICATOR MALFUNCTIONED 03/15/2000

369D 369H45267 COCKPIT 2000041500105

TORQUE GAUGE NEEDLE BOUNCES.

HUGHES SEAL LEAKING 01/04/2000

369D 369D254225 T/R TRANSMISSION 2000041500157

DURING INSPECTION, FOUND THE TAIL ROTOR OUTPUT SEAL LEAKING. REPLACED SEAL. (X)

HUGHES LIGHT CONTAMINATED 01/19/1999

369D HORIZONTAL STAB 2000041500159

DURING INSPECTION, THE AFT TAIL LIGHT WAS FOUND INOPERABLE. FURTHER INSPECTION REVEALED TAIL LIGHT LENS WAS HALF FILLED WITH WATER. THE INSTALLATION OF THIS LIGHT ASSEMBLY LENDS ITSELF TO THIS TYPE OF DAMAGE DURING OPERATION IN RAINY WEATHER. (X)

HUGHES CLAMP WRONG PART 01/10/2000

369D TOT HARNESS 2000041500243

DURING INSPECTION, THE ADEL CLAMP ON THE TOT LEAD AT THE EXHAUST CLAMP WAS FOUND TO BE THE WRONG PART NUMBER AND SUBSEQUENTLY THE CUSHION WAS UNABLE TO SURVIVE THE TEMPERATURES. REPLACED WITH PROPER PART NUMBER CLAMP. (X)

HUGHES SWASHPLATE LACK OF LUBE 01/09/2000

369D 369021800501 TAIL ROTOR 2000041500577 1709

DURING INSPECTION, THE TAIL ROTOR SWASHPLATE WAS FOUND LOW ON GREASE. FURTHER INSPECTION REVEALED NO DEFECTS AND UNIT WAS RE-GREASED AND RETURNED TO SERVICE. (X)

HUGHES ALLSN FITTING LOOSE 01/04/2000

369D 250C* AN8378D FUEL SYSTEM 2000041500158

DURING INSPECTION, DISCOVERED THE FIREWALL FUEL FITTING (BULKHEAD FITTING) WAS LOOSE IN THE FIREWALL. RE-TORQUED JAM NUT. (X)

HUGHES ALLSN IGNITION LEAD CHAFED 01/28/2000

369D 250C20B 6870855 ENGINE 2000041500067

DURING POST-FLIGHT, IGNITION LEAD WAS FOUND CHAFING ON THE LOWER B-NUT OF THE PC AIR REFERENCE LINE ON THE GOVERNOR. FURTHER INSPECTION REVEALED THE ADEL CLAMPS FOR THE LEAD AND LINE, AT THAT POINT, WERE MISSING. REPLACED MISSING CLAMPS. (X)

HUGHES ALLSN PROBE DAMAGED 03/07/2000 1000

369HS 250C20 ENGINE 2000041500246

THE NYLON INSERT IN THE TEMPERATURE PROBE LET GO RESULTING IN FLUCTUATION AND DROPPING OIL PRESSURE AND A LOSS OF OIL.THE ENGINE HAD TO BE TORN DOWN FOR INSPECTION. MAIN DAMAGE SEEMS TO BE THE ENGINE''S NR 8 BEARING WHICH WAS DESTROYED. (X)

ISRAEL GARRTT MANIFOLD LEAKING 03/20/2000 6382

1124 TFE73131G 30718321 FUEL SYSTEM 2000041500248

DURING ROUTINE 300-HR ENG INSP, FUEL DISCOVERED PUDDLED INSIDE THE LEFT ENGINE LOWER COWLING. A LEAK CHECK CONFIRMED FUEL LEAKING FROM BOTTOM RIB DUCT WHERE THE PRIMARY AND SECONDARY FUEL MANIFOLD LINES ENTER THE 6 O''CLOCK STRUT. LEAK WAS PINPOINTED TO A CRACKED INNER FUEL MANIFOLD FITTING INSIDE STRUT. INNER MANIFOLD HAD CRACKED AT SECONDARY MANIFOLD FITTING WHERE IT IS BRAZED ONTO INNER

JETAIR SEAL FAILED 03/08/2000

JETSTM4101 7216FR964T MLG 2000040500102

4046 CSN MFG - 4-97. UNIT LEAKING FROM GLAND SEAL (PREMATURE FAILURE). SEAL FOUND ERODED ON OUTBOARD

SIDE BETWEEN SEAL SURFACE AND BACK-UP. THIS IS ONE EXAMPLE OF NUMEROUS UNITS RETURNED FOR REPAIR AFTER 3,000 - 5,000 CYLES WHEN THE OVERHAUL CYLINDER IS 12,000 TO 24,000 DEPENDING ON A/C UNITS WERE MFG IN 1997. MFG OF SEAL SAID RAMRODS WERE AT FAULT, MFGOF UNIT THOUGHT THE SEAL WAS BAD. NO RESOLUTION TO PROBLEM. CONDITION AS OCCURRED IN BOTH JS41 AND SAAB340B UNITS (AIR886410-1 AND AIR86414-1). (X)

LEAR VALVE FAILED 03/10/2000

35A 66001983 FLOW CONTROL 2000040500119 2704

AIRCRAFT CABIN DID NOT PRESSURIZE WHEN DEPARTING. AIRCRAFT RETURNED TO LAS VEGAS FOR REPAIR. CABIN FLOW CONTROL VALVEWAS FOUND DEFECTIVE. AN OVERHAULED CABIN FLOW CONTROL VALVE WAS INSTALLED. GROUND RUNS STILL WERE NOT SATISFACTORY. FURTHER INVEST REVEALED THE K2 RELAY ON THE PCB1 SQUAT SWITCH RELAY PANEL TO BE INTERMITTENT. THIS RELAY WAS ALSO CHANGED. FUNCTIONAL CHECK OF THE PRESSURIZATION SYSTEM REVEALED NO FURTHER DISCREPANCIES. THE DEFECTIVE COMPONENTS ARE ''ONCONDITION'' ITEMS WITHOUT SCHEUDLE REPLACEMENT OR OVERHAUL. A COMPLETE PRESSURIZATION CHECK WAS COMPLETED AS PART OF THE LAST C-CHECK (1200 HOUR INSP). NO DEFECTS WERE NOTED AT THAT TIME

LEAR WHEEL DAMAGED 03/20/2000

35A 95439914 MLG 2000042200015 87

WHEN AIRCRAFT ROLLED UP TO GATE, NOTICED PART OF THE NR 4 OUTER WHEEL HALF WAS MISSING. APPROXIMATELY ONE-HALF OF THEWHEEL BEND WAS GONE AND TIRE DESTROYED. NO DAMAGE WAS FOUND AT NR

LEAR SMOKE DETECTED 03/03/2000

35A CABIN 2000042200575

CARPET EDGE CAME INTO CONTACT WITH WING HEAT DUCT. WING HEAT WAS USED LONGER THAN NORMAL DUE TO WEATHER CONDITIONS. THE CARPET EDGE WAS HEATED UNTIL IT STARTED SMOKING. THE AIRCRAFT DIVERTED FOR PRECAUTION. THE CARPET WAS TRIMMED BACK AND ADDITIONAL INSULATION WAS INSTALLED TO PREVENT RECURRENCE. (X)

LEAR GASKET ERODED 02/08/2000

35LEAR 66003353 NR 1 ENGINE 2000040800065

DURING CRUISE FLIGHT, THE NR 1 ENGINE FIRE WARNING LIGHT ILLUMINATED. THE PILOT RETARDED POWER, AND LIGHT EXTINGUISHED. ADVANCING POWER AGAIN CAUSED THE LIGHT TO ILLUMINATE AGAIN, RETARDING POWER AGAIN CAUSED IT TO EXTINGUISH. AN UNEVENTFUL LANDING WAS MADE. UPON INVEST, MAINTENANCE FOUND THE BLEED AIR GASKET, PN 6600335-3, ERODED. THIS GASKET IS INSTALLED BETWEEN THE BLEED AIR DUCT ASSY, PN 2655100-72, AND BLEED AIR FITTING ASSY, PN 2652083-25, ON THE RIGHT HAND SIDE OF THE ENGINE. THIS ALLOWED BLEED AIR TO ESCAPE WITH THE HOT GASSES HEATING UP THE NEARBY FIRE LOOP. GASKET REPLACED AND ACFT

LEAR GARRTT CARBON SEAL FAILED 01/17/2000 231

36A TFE73122B 30756451 ENGINE 2000040500038

ENGINE EXPERIENCED IN-FLIGHT SHUTDOWN 230.5 HRS FOLLOWING CZI (COMPRESSOR ZONE INSP) AND INSTALL OF NEW STYLE CARBON SEALS PER SB 72-3596 REV 7. ENG TEARDOWN REVEALED FAILURE OF PLANETARY GEAR BEARINGS, PLANETARY GEARS, SUN GEAR, AND RINGGEAR. FAILURE CAUSED BY OIL STARVATION TO PLANETARY ASSY DUE TO BLOCKAGES OF PLANETARY OIL MANIFOLDS OIL JET STRAINER,PN 894764-3. THE HAT SHAPED STRAINER WAS PACKED WITH CARBON WHICH REDUCED OIL FLOW TO PLANETARY GEAR AREA. ENG TOTALLY DISASSEMBLED TO ACCOMPLISH LUBRICATION CONTAMINATION INSP AND DETERMINE WHICH COMP GENERATED CARBON PARTICLES. PARTICLES TRACED TO NEW NR 5 CARBON SEAL PN 3075645-1, SN 9919366801122. (X)

MOONEY LYC CASE CRACKED 03/06/2000 3270

M20E IO360A1A ENGINE 2000040500009 1250

PILOT NOTED OIL LEAK. DURING INSPECTION FOR OIL LEAK, ENGINE CASE WAS FOUND CRACKED BELOW NR 1 CYLINDER BASE PAD. CRACK IS APPROXIMATELY 4.5 INCHES PARALLEL TO CYLINDER PAD. ALSO FOUND NR 1 INTAKE

MOONEY LYC RETAINER SEAL DAMAGED 02/08/2000

M20J IO360A3B6 65007 NR 1 CYLINDER 2000040500029 2006

DURING ANNUAL INSPECTION, DISCOVERED NR 1 CYLINDER EXHAUST PUSH ROD TUBE SEAL AREA AT CASE HALF RETAINER PROTRUDING AT AN ANGLE. REMOVED NR 1 EXHAUST PUSH ROD, FOUND LIFTER BODY CRACKED, AND BROKEN. LIFTER WILL NOT COME OUT. SUBMITTER SUSPECTED CAUSE WAS STUCK EXHAUST VALVE AT SOME TIME. ENGINE IS AT TBO AND WILL BE REPLACED. (X)

MOONEY CONT SLICK PLATE MISMANUFACTURE 03/10/2000 631

M20K TSIO360MB MAGNETO MOUNT 2000040800262

WHEN LT AND RT MAGNETOS WERE BEING INSTALLED ON ENGINE AFTER INTERNAL INSPECTION OF MAGNETOS, NOTED MAGNETO HOLD-DOWN PLATES FROM ENGINE STUD TO MAGNETO MOUNTING FLANGE ONLY ENGAGED FLANGE BY APPROXIMATELY .0625 INCH IF MOUNTED EVEN, OR ONLY ONE CORNER OF PLATE IF COCKED TO ONE SIDE. SUBMITTER STATED MOUNTING PLATES ARE TYPE NORMALLY SENT WITH NEW MAGNETOS. ORDERED 4 EACH TCM, PN 630535, MOUNT PLATES AND INSTALLED, FIT GOOD. (X)

MOONEY BENDIX BEARING DAMAGED 02/02/2000

M20M 047414300 PITCH TRIM SERVO 2000041200115

LUBRICANT IN ROLLER BEARING AT FORWARD END OF PITCH TRIM TUBE BECAME GUMMED UP AND HARDENED TO THE POINT THAT NEITHER ELECTRIC OR HAND WHEEL ACTUATION OF PITCH TRIM WAS POSSIBLE. MALFUNTION WAS CORRECTED BY REPLACING BEARING. THERE IS NOPROVISION FOR PERIODIC LUBRICATION. AIRCRAFT WAS

PIPER LYC SHAFT DAMAGED 01/02/2000 1591

PA18150 O320A2B IDLER GEAR 2000042200454

1,590.6 HRS SINCE FACTORY NEW ENGINE INSTALLED. CRANKSHAFT APPEARED TO BE BINDING WITH SPARK PLUGS REMOVED. METAL (STEEL & ALUM) IN SCREENS. UPON REMOVAL OF MAGNETOS, OBSERVED LT IDLER GEAR COCKING BEFORE IT TURNED, WHILE MOVING CRANKSHAFT FLANGE BACK AND FORTH APPROX 30 DEGREES. UPON REMOVAL OF ACCESSORY CASE, FOUND LT IDLER SHAFT LOOSE AT CRANKCASE ATTACH. DAMAGE NOTED TO IDLER SHAFT AND CRANKCASE BOSS, RT IDLER SHAFT ATTACH BOLT, LOWER BOLT FND FINGER TIGHT, UPPER, BOLT FND PROPERLY TORQUED. BOTH STILL SAFETY WIRED. ENGINE DISMANTLED FOR COMPLETE O/H. (X)

PIPER TUBE DAMAGED 02/03/2000 4595

PA24250 2108000 MLG 2000040800039

UPON INVEST FOLLOWING LANDING GEAR COLLAPSE DURING TOUCH DOWN, FOUND LINKS CONNECTING L/G MOTOR RELEASE ARM TO MOTOR RELEASE TUBE BENT TO THEIR OTBD SIDES. INVESTIGATION SUGGESTS AN ATTEMPT WAS MADE TO MANUALLY RAISE GEAR USING EMERGENCY EXTEND LEVER THAT COULD CAUSE RELEASE TUBE TO DROP.

PIPER LANDING GEAR COLLAPSED 03/24/2000

PA24250 FUSELAGE 2000042200849

GEAR COLLAPSED ON ROLL-OUT. PILOT AND PASSENGER OBSERVED GREEN LIGHT ON FINAL. PIPER SL 782B DESCRIBES SIMILAR SCENERIO. (X)

PIPER HOUSING CRACKED 03/07/2000 11250

PA28161 65319004 LT MLG STRUT 2000042200280

MAIN GEAR STRUT HOUSING HAS ATTACH EARS ON IT WHERE UPPER END OF TORQUE LINK ATTACHES. STUDENT REPORTED SHIMMEY AND VIBRATION AFTER LANDING. WHEN ACFT WAS CHECKED, ONE OF TWO EARS ON THE STRUT HOUSING WAS FOUND BROKEN OFF. PART THOUGHTTO BE ORIGINAL. ACFT HAS 11,250.0 HRS SINCE NEW IN 1979. UNKNOWN IF FATIGUE PROBLEM OR STUDENT LANDED IN A GROSS-WINDAND SIDE-LOADED GEAR, OR A

PIPER LYC BOLT MISSING 03/15/2000

PA28180 O320* STD847 CRANKSHAFT 2000042200157

FOUND CRANKSHAFT DRIVE GEAR ATTACHING BOLT MISSING AFTER REMOVAL OF REAR HOUSING FOR OIL PUMP GEAR REPLACEMENT. REPLACED GEAR, DOWEL PILOT, BOLT AND LOCKPLATE. (X)

PIPER FLOAT BLOCKED 01/25/2000 4122

PA28181 548671 LT WING TANK 2000040800087

PILOT REPORTED FUEL QUANTITY INDICATION ALWAYS ON ''E'' FOR LEFT TANK. FOUND THE FLOAT BLOCK WAS DETACHED FROM THE FLOAT SWING ARM. THE FLOAT BLOCK WAS SO BADLY WORN IT SLIPPED OVER THE RETAINING WASHER ON THE SWING ARM. POSSIBLE CAUSE,TOO SOFT OF A MATERIAL USED IN FLOAT BLOCK, AND NO INSERT TO PREVENT BLOCK FROM WEARING THROUGH. REF: IPC SECT VIII FUEL FIGURE 47. (X)

PIPER ENCODER LEAKING 03/09/2000 1087

PA28181 03753302 COCKPIT 2000041200060

INTERNAL LEAK IN ALTITUDE ENCODER GREATER THAN THE ALLOWED 100 FEET/MINUTE IN NON-PRESSURIZED AIRCRAFT. THESE ENCODERSARE NORMALLY VERY RELIABLE, YET THIS UNIT IS ONLY TWO YEARS OLD AND PROBLEM WAS DISCOVERED ON AIRCRAFT''S FIRST RECERTIFICATION SINCE PIPER AIRCRAFT INSTALLATION. POSSIBLE NARCO MFG DEFECT IN ASSEMBLY OF PRESSURE SENSOR. LEAKS AROUND GLUE JOINT IN SENSOR. (X)

PIPER STUD WORN 04/07/2000

PA28R180 20829 MLG 2000041500565

ON ANNUAL INSPECTION (AD 97-01-01R1), FOUND BOTH MAIN LANDING GEARS SIDEBRACE STUDS WORN, RT 0.624 INCH AND THE LT, 0.524 INCH AND SIDEBRACE BUSHING WORN. REPLACED BOTH SIDE BRACE STUDS WITH .6250 INCH, P/N 78717-002, AND REAMED EXISTING BUSHING TO 0.624 INCH PER AD 97-01-01R1. (X)

PIPER LYC MOUNT CRACKED 12/08/1999 4103

PA28R180 IO360B1E 6711949 ENGINE 2000040800127

DURING ANNUAL INSPECTION, NOTICED A RUST COLORED AREA ON THE ENG MOUNT, LOWER CROSSTUBE, ON LT SECTION. CLOSER INSPECTION REVEALED TUBE WAS CRACKED ALMOST ALL THE WAY AROUND. THE ENGINE WAS REMOVED AND THE CRACKED AREA WELDED. NOTE: SUBMITTER STATED IN THE NEXT HANGAR ANOTHER PA 28R-180 IN FOR A 100-HR INSPECTION AND FOUND MOUNT CRACKED IN SAME AREA. (X)

PIPER LYC MOUNT CRACKED 12/08/1999 3487

PA28R180 IO360B1E 6711949 ENGINE 2000040800128

DURING A 100-HOUR INSPECTION, FOUND THE ENGINE MOUNT CRACKED, LOWER CROSS MEMBER, LEFT SIDE. REMOVED ENGINE AND FOUND THE TUBE CRACKED ALMOST ALL THE WAY AROUND. WELDED. (X)

PIPER BELT DISINTEGRATED 02/17/2000

PA28R200 7396509 ALTERNATOR 2000041200059

ALTERNATAOR BELT CAME APART. ALTERNATOR QUIT WORKING. BATTERY DRY OF ACID. BATTERY DEAD. AIRCRAFT LANDED. LANDING GEAR NOT DOWN AND LOCKED. RIGHT GEAR WAS NOT LOCKED. (X)

PIPER WIEBEL ROD END FAILED 03/06/2000 11364

PA31350 21151 762554 MLG 2000040500010

RIGHT MAIN LANDING GEAR FAILED TO RETRACT AFTER TAKEOFF. AFTER NUMEROUS ATTEMPTS AND AFTER PERFORMING A MANUAL EXTENSION OF GEAR, A GREEN LIGHT COULD NOT BE OBTAINED ON THE RIGHT GEAR. AFTER A GROUND VISUAL CHECK, IT APPEARED GEAR WAS DOWN. A LANDING WAS PERFORMED, AND AFTER ROLL-OUT, RIGHT LANDING GEAR COLLAPSED. AIRCRAFT RECEIVED MINOR DAMAGE. UPON INSPECTION, DISCOVERED THE ROD END HAD BROKE OUT ON THE RT MAIN GEAR ACTUATOR. ROD END FAILED JUST AFTER UNLOCKING THE RT GEAR AT A POINT IN WHICH GEAR WOULD NOT FALL BACK INTO A LOCK POSITION. (X)

PIPER FORK CRACKED 02/23/2000 2528

PA31350 C4503 MLG 2000041200094 1479

CRACK INDICATION .75 INCH LONG IN SLOT 3. (X)

PIPER LYC VERNATHERM DAMAGED 02/23/2000

PA31350 LTIO540J2BD 53E19600 OIL TEMP 2000042200285

PILOTS REPORTED ENGINE NOT MAKING FULL POWER AND OIL PRESSURE LOW. MAINTENANCE FOUND A PIECE OF CLIP UNDER THE OIL PRESSURE RELIEF VALVE. THE RETAINING CLIP FOR THE VERNATHERM VALVE FOUND TO BE THE SOURCE. FOUR NEW VERNOTHERM VALVES INSTALLED. (X)

PIPER LATCH CRACKED 02/11/2000

PA32260 65202800 COWL 2000040500074

CRACKS FORM AT THE BEND RADIUS OF THE LATCH ASSEMBLY WITHIN A FEW HOURS OF NORMAL OPERATION. SEVERAL ASSEMBLIES (6) HAVE FAILED IN THE SAME MANNER. THIS ASSY IS FORMED WITH A MUCH SMALLER BEND RADIUS AS COMPARED TO AN OLDER STYLE PIPER OEM LATCH ASSY.

PIPER LYC CARBURETOR SEPARATED 03/18/2000 1800

PA32260 O540E4B5 LW10540 ENGINE 2000042200283

CARBURETOR SEPARATED AT PARTING SURFACE CAUSING BOTTOM HALF OF CARBURETOR TO ALMOST FALL OFF. LOCKING TABS WERE LOCKED, BOLTS WERE LOOSE. SUBMITTER STATED THIS IS THE 3RD CARBURETOR TO HAVE THIS

PIPER LYC DIPSTICK SEPARATED 03/22/2000

PA32RT300T TIO540C1A LW14729 OIL CAP 2000040500012 206

PILOT REPORTED TO REPAIR SHOP, THAT AFTER LANDING, HE HAD AN OIL LEAK IN THE ENGINE AREA. AFTER INSPECTION, FOUND THATDIP ROD IN THE OIL CAP WAS NOT INSTALLED IN THE CAP AND HAD FALLEN DOWN INTO THE OIL FILL TUBE OF THE ENGINE. UNDER INSPECTION WITH A MAGNIFYING GLASS, NO SIGNS THE ROLL PIN THAT SHOULD HAVE BEEN INSTALLED TO HOLD THE ROD INTO THE CAP HADEVER BEEN INSTALLED. THIS ENGINE HAD BEEN OVERHAULED BY THE LYCOMING FACTORY, AND WAS NOT AN AFTER MARKET OVERHAUL.

PIPER RIVET MISSING 03/03/2000 6250

PA34200T 635012 SKIN 2000041500056

FOUND MISSING AND WORKING RIVETS AND SEPARATION OF SKINS BETWEEN FIN ROOT FITTING AND OUTBOARD SKINS, BOTH SIDES.

PIPER CONT SERVO FAILED 02/27/2000 16

PA34220T TSIO360RB RSA5AD FUEL INJECTOR 2000040800080

ON BASE LEG TO GOODYEAR AIRPORT, THE LEFT ENGINE LAGGED POWER TO LANDING. A SAFE LANDING WAS MADE AND THE AIRCRAFT WASTAKEN TO MAINTENANCE FOR INSP OF THE LEFT ENGINE. ON GROUND RUN-UP, FOUND THE LEFT ENGINE WAS RUNNING RICH AT LOW POWER SETTINGS. THE LEFT FUEL SERVO WAS REMOVED AND SENT TO TCM FOR WARRANTY. A NEW FUEL SERVO WAS INSTALLED FROM STOCK AND TRIM RUN COMPLETED, THE AIRCRAFT

PIPER TRUNNION DAMAGED 02/21/2000 3938

PA421000 40294006 MLG WW 2000042200266

PART IS MAIN LANDING GEAR REAR SIDE BRACE TRUNNION. A SMALL CRACK WAS FOUND IN THE WEB NEXT TO THE INBOARD LOWER BOLTHOLE ON BOTH RT AND LT MAIN GEAR. CRACK WAS DETECTED BY SMALL CRACK IN PAINT AND VERIFIED BY DYE PENETRANT. (X)

PIPER STRUT BROKEN 02/08/2000 5737

PA44180 67037004 LT MLG 2000042200576

AFTER THROTTLE ADVANCEMENT ON A TOUCH AND GO LANDING, THE LEFT MAIN GEAR STRUT BROKE INSIDE THE FORK CASTING. THE MAINWHEEL ASSY AND FORK REMAINED ATTACHED TO THE AIRCRAFT BY THE BRAKE HOSE AND WAS WEDGED UNDER THE LEFT NACELLE AND FLAP. PROPELLER ON LEFT SIDE CONTACTED RUNWAY. RESEARCH OF MAINTENANCE RECORDS REVEALED STRUT HAD NEVER BEEN REPLACED. (X)

PIPER LYC BEARING MAKING METAL 02/09/2000 215

PA46350P TIO540A2A NR 5 ENGINE 2000042200401

DURING AN ANNUAL INSPECTION, FOUND METAL SHAVINGS IN OIL SCREEN. REMOVED ENGINE AND SENT TO LYCOMING FOR REPAIRS. (X)

PIPER LYC BEARING MAKING METAL 02/09/2000 336

PA46350P TIO540AE2A NR 5 ENGINE 2000042200518

DURING AN ANNUAL INSPECTION, FOUND METAL SHAVINGS IN OIL SCREEN. REMOVED ENGINE AND SENT TO LYCOMING FOR REPAIRS. (X)

PIPER BEARING CRACKED 02/28/2000 2724

PA60601P 2202 PROPELLER 2000041200181 1134

CRACK INDICATION. (X)

RAYTHN ENCODER MALFUNCTIONED 03/10/2000

1900C 066306200 COCKPIT 2000042200156 1486

PILOT REPORTED THAT ALTIMETER FLAGGED. COULD NOT DUPLICATE PROBLEM ON TEST BENCH. RE-CERTIFIED ALTIMETER AND RETURNEDTO SERVICE. (X)

RAYTHN SEAL DETERIORATED 02/07/2000 5151

1900D C63371 PROPELLER BLADE 2000040500050 673

NEW STYLE SEAL APPEARS TO HAVE DETERIORATED AFTER 672.4 HOURS OF SERVICE. RETURNED PARTS TO FACTORY FOR EVALUATION. (X)

RAYTHN ALTIMETER MALFUNCTIONED 03/01/2000

1900D 060030620000 COCKPIT 2000040500098 148

PILOT WRITE UP WAS ''STICKS SEVERAL THOUSAND FEET'', CALIBRATION WAS OUT AT -1,000 AND ZERO FEET AND 500 FEET, ENCODER FUNCTIONS PROPERLY, COULD NOT VERIFY OR DUPLICATE STICKING. ALTIMETER WAS 40 FEET LOW AT -1,000 FEET AND PROGRESSIVELY GOT BETER. AT +1,000 FEET WAS ZERO ERROR AND WITHIN LIMITS FOR REST OF

RAYTHN GYRO INOPERATIVE 02/23/2000 682

1900D 6226136002 COCKPIT 2000040500099

CAPTAIN''S DIRECTIONAL GYRO INOPERATIVE. NR 1 GYRO LOCKED UP. (X)

RAYTHN BEARING DISINTEGRATED 01/28/2000

2000 13889 MLG WHEEL 2000040800086

PILOT NOTICED RIGHT MAIN LANDING GEAR INBOARD WHEEL ASSEMBLY TILTED AND HUB CAP BULGED. UPON INSPECTION, FOUND INBOARDBEARING (HUBCAP SIDE) HAD FAILED CAUSING DAMAGE TO WHEEL AND BRAKE ASSY. NO APPARENT FAULT IN WORKMANSHIP FOUND. (X)

RAYTHN CONT ENGINE MAKING METAL 02/25/2000

58 IO520C RIGHT 2000040800034

ATL - RIGHT ENGINE PROPELLER WENT INTO FEATHER ON TAKEOFF. FOUND ALUMINUM PLUGGING PROPELLER SCREEN. REMOVED AND REPLACED ENGINE. SUBMITTER STATED CAUSE UNKNOWN AT THIS TIME. (X)

RAYTHN CONT SUPPORT CRACKED 02/21/2000 3304

58TC TSIO520L 640321 RT ENGINE 2000041200178

DURING ANNUAL INSPECTION, FOUND RT ENGINE TURBO MOUNT BRACKET CRACKED UNDER AND NEAR END OF LOWER STIFFENER BEND. CRACK IS APPROXIMATELY ONE INCH LONG AND EXTENDING TOWARD BUT NOT TO LOWER LIGHTING HOLE. NO EVIDENCE OF CAUSE FOR CRACK. (X)

RAYTHN VALVE FAILED 04/04/2000

76 353800657 PARKING BRAKE 2000042200846

DURING ENGINE-OUT TRAINING, IF THE PILOT''S RT RUDDER IS FULLY DEPRESSED AND THE PILOT''S FOOT IS HIGH AND RT ON THE RUDDER PEDAL, THE PILOT''S RT FOOT CAN INADVERTENTLY PULL BACK ON THE PARKING BRAKE VALVE ACTUATOR ARM AND SET THE BRAKES. IF NOT CAUGHT PRIOR TO LANDING, BLOWN TIRES WILL RESULT WITH POSSIBLE LOSS OF DIRECTIONAL CONTROL. BEECHCRAFT (RAYTHEON) HAS BEEN NOTIFIED. HAVE REQUESTED THEIR HELP IN POSSIBLE RELOCATION OF THE VALVE. (X)

RAYTHN JACKSCREW WRONG PART 02/09/2000

99 503801531 TE FLAP 2000040500031

DURING REPLACEMENT OF FLAP ACTUATORS, LEFT INBOARD FLAP MOVED IN THE OPPOSITE DIRECTION OF FLAP SELECTOR POSITION. REMOVED FLAP ACTUATOR AND DETERMINED THAT DRIVE ASSEMBLY WAS INCORRECT FOR INBOARD ACTUATOR. (X)

RAYTHN CABLE MISROUTED 01/28/2000

A36 RUDDER 2000040800085

DURING AIRCRAFT''S FIRST ANNUAL INSPECTION (SINCE NEW), FOUND RUDDER CABLE PN R-106-524051-5 INCORRECTLY ROUTED (WRONG BULKHEAD LIGHTNING HOLE) THROUGH AREA UNDER LANDING GEAR ACTUATOR. PART WAS NOT DAMAGED, SIMPLE RE-ROUTING THROUGH CORRECT HOLE CORRECTED ISSUE. ACTT: 69.1 HOURS. (X)

RAYTHN BATTERY SHORTED 03/12/2000

A36TC 363800611 E/E BAY 2000042200161

WHILE PILOT WAS COMPLETING THE BEFORE TAKEOFF CHECK LIST, A COMPLETE ELECTRICAL SYSTEM FAILURE WAS EXPERIENCED. INITIAL INVESTIGATION REVEALED NO CIRCUIT BREAKERS, FUSES, OR CURRENT LIMITERS HAD FAILED TO OPEN. THE BATTERY WAS FOUND SMOKING. UPON REMOVING THE BATTERY CELL CAPS, ALL CELLS WERE FOUND ALMOST COMPLETELY DRY. SOURCE OF ELEC SHORT FOUND TO BETHE THROTTLE CONTROL CABLE, PN 36-380061-1, HAD CHAFED AGAINST THE POSITIVE BATTERY CABLE INSULATION UNTIL THE 2 CABLESSHORTED TOGETHER. THE BATTERY, POSITIVE BATTERY CABLE, AND THROTTLE CONTROL CABLE ALL HAD TO BE REPLACED TO RETURN

RAYTHN CABLE FAILED 01/31/2000 794

B60 12957Y TE FLAP 2000040500131

CABLE WITH A TWIST TEST OF THE CABLE END SIMILAR TO THE DUKES CABLES ON THE PIPER PA31 FLAP SYSTEMS.

RAYTHN SUPPORT WORN 02/15/2000

B99 115620020 HORIZONTAL STAB 2000041200146

ROUTINE INSPECTION REVEALED HORIZONTAL STABILIZER LOOSE AT PIVOT SUPPORTS. REPLACED BOTH LEFT AND RIGHT PIVOT SUPPORT BRACKETS AND BEARINGS AND HARDWARE. PROBLEM DETERMINED TO BE DUE TO NORMAL WEAR AND POSSIBLE LACK OF LUBRICATION. (X)

RAYTHN PWA EXHAUST PIPE CRACKED 02/22/2000 282

C90A PT6A21 1099500001 ENGINE 2000042200400

CRACKED EXHAUST STACK. 2.75 INCH CRACK WAS FOUND AROUND CIRCUMFERENCE AT WELD ATTACH POINT OF NACELLE INLET DE-ICE TUBE. SUBMITTER STATED THIS IS THE 5TH OCCURRENCE OF SAME PROBLEM ON SAME AIRCRAFT. A RAYTHEON REP HAS BEEN CONTACTED AND A FUTURE SERVICE BULLETIN IS PENDING RELEASE. (X)

RAYTHN ACTUATOR CRACKED 03/15/2000

C99 993880081 MLG 2000040800299 72

HYDRAULIC FLUID FOUND IN WHEELWELL DURING POST-FLIGHT INSPECTION. LANDING GEAR RETRACTION PERFORMED, FOUND 2 INCH CRACK AROUND TOP OF ACTUATOR. ACTUATOR OVERHAULED. (X)

RAYTHN BOLT CRACKED 02/01/2000 8087

E90 817841432 WING 2000040800228

DURING INSPECTION OF WING SPARS IAW AD 89-25-10 AND BEECH SIRM MANUAL, THE LEFT LOWER FORWARD WING BOLT WAS FOUND CRACKED USING DYE PENETRANT. (X)

SKRSKY PUMP INOPERATIVE 11/04/1999

CH54A 6550453 FUEL BOOST 2000040800017

UNIT WAS INOPERABLE. RETURNED TO STOCK. BENCH CHECKED BAD, WINDING SHORTED, LEAKING AROUND ELECTRICAL LEADS. REPLACED COMPLETE UNIT WITH AN EXTERNALLY MOUNTED FUEL BOOST PUMP. (X)

SKRSKY BLADE CRACKED 02/26/2000 648

S55 S101521203 TAIL ROTOR 2000041500189 98

ITEM CRACKED AT ROOT ATTACH POINT OF TAIL ROTOR BLADE. REMOVED TAIL ROTOR BLADE FROM ASSY AND DISCOVERED TAIL ROTOR BLADE ATTACH BOLTS WERE NOT TORQUED TO MANUFACTURER SPECIFICATIONS. (X)

SKRSKY SKRSKY BEARING MAKING METAL 02/16/2000

S64E SB1111004 TAIL ROTOR 2000041200032 1

AFTER A HALF-HOUR GROUND RUN AND 0.5 FLIGHT, FOUND A LARGE VOLUME OF DISCOLORED (PURPLE IN APPEARANCE) AND METAL CONTAMINATED GREASE HAD EXTRUDED PAST THE BEARING SEAL AND WAS FOUND ON THE A/C DECK UNDER THE BEARING. THE BEARING WAS NOT HOT TO THE TOUCH AT THAT TIME. ESTIMATED GREASE LOSS WAS 5 CC''S. THE BEARING IS BEING RETURNED TO THE AIRCRAFT MANUFACTURER FOR THEIR

SNIAS INVERTER FAILED 12/23/1999 146

AS350B2 SS100 E/E BAY 2000041200086

NO A/C OUTPUT. REMOVED AND REPLACED. (X)

SNIAS BRUSH BLOCK WORN 11/08/1999 234

AS350B2 150SG122Q STARTER/GEN 2000041200113

BRUSHES WORN. REMOVED AND REPLACED. (X)

SNIAS BEARING DELAMINATED 02/14/2000 512

AS350B2 350A33215300 TAIL ROTOR 2000042200030

BEARING CRACKED ON OUTER CENTER OF LAMINATION. REMOVED AND REPLACED. (X)

SNIAS INDICATOR MISINSTALLED 10/07/1999

AS350B2 648180101 OIL PRESSURE 2000042200036

OIL PRESSURE INDICATOR - PART USED FOR TROUBLESHOOTING ONLY - WORKS OKAY. REMOVED AND REPLACED. (X)

SNIAS INDICATOR LOOSE 08/16/1999 221

AS350B2 066304607 COCKPIT HSI 2000042200167

INDICATOR LOOSE IN FRAME AND PRECESSES. REMOVED AND REPLACED. (X)

SNIAS DUNLOP HOUSING DAMAGED 02/02/2000 5791

AS350B2 AC66375 TAIL ROTOR SERVO 2000042200281 1852

FAILED EDDY CURRENT TESTING. CRACK DETECTED AT HOLE PLUG (CYLINDER) ON LOWER END OF SERVO BODY. POSSIBLE CAUSE, DURING MANUFACTURING, HOLE PLUG EITHER TOO LARGE OR HOLE PLUG INSTALLED INCORRECTLY.

SNIAS PITCH LINK WORN 12/29/1999 428

AS350B2 350A33214501 TAIL ROTOR 2000042200650

T/R PITCH CHANGE REMOVED PER AD 98-24-25. WORN OUT. REMOVED AND REPLACED. (X)

SNIAS TRANSCEIVER INTERMITTENT 02/24/2000 221

AS350B2 TFM500G UHF COMM 2000042200763

TRANSCEIVER TRANSMITS INTERMITTENTLY ON UHF FREQUENCIES. REMOVED AND REPLACED. (X)

SNIAS TMECA PUMP FAILED 10/14/1999 163

AS350B2 ARRIEL1D P94B12209 FUEL SYSTEM 2000041200087

BOOST PUMP FAILED DURING CRUISE FLIGHT. REMOVED AND REPLACED. (X)

SNIAS COUNTERWEIG GALLED 01/07/2000 3022

AS350BA VIBRATION 2000041200116

LEAD METAL FLAKING DISCOVERED AT SPHERICAL BEARING INSIDE OF FREQUENCY ADAPTERS. FURTHER INSP REVEALED BROKEN BOLT INSIDE OF ANTI-VIBRATOR SPRING HOUSING. UPON REMOVAL AND DISASSEMBLY OF ANTI-VIBRATOR ASSY, THE LEAD WEIGHTS WERE FOUND SEVERELY GALLED DUE TO THE LOSS OF TORQUE AND EVENTUAL FAILURE OF THE ATTACHMENT BOLT THAT SECURES THE SMALLER LEADWEIGHT TO THE INNER SHAFT OF THE ASSY. THE ALUM LOCATING PIN HAD ALSO FAILED. RECOMMEND DURING 500-HR ''T'' INSPECTIONS, THE LIFTING EYE PLUG BE REMOVED FROM THE TIP OF THE ANTI-VIBRATOR ASSY, AND A TORQUE CHECK BE PERFORMED

SOCATA SWITCH FAILED 03/08/2000 45

TB21 TB2061238001 ELECTRICAL 2000040500011

INTERNAL ELECTRICAL FAILURE OF PRESSURE SWITCH AT 44.8 HOURS. THIS IS THE 7TH SWITCH INSTALLED IN THIS AIRCRAFT. SWITCH FAILURE IS A MIXTURE OF ELECTRICAL AND MECHANICAL (LEAKAGE).

UROCOP TRANSMISSION FAILED 11/11/1999

EC135P1 4649001007 MAIN ROTOR 2000041200114

MAIN TRANSMISSION FAILED. REMOVED AND REPLACED. (X)

UROCOP PWA PUMP INOPERATIVE 12/16/1999 384

EC135P1 PW206B 9A2045 FUEL SYSTEM 2000041200085

MOTOR INOPERABLE. LEAKING FUEL THROUGH (-) TERMINAL. REMOVED AND REPLACED. (X)

OMB No. 2120-0003

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MALFUNCTION OR DEFECT REPORT

OPER. Control No.	
ATA Code	
1. **A/C Reg. No.**	**N-**

Enter pertinent data	**MANUFACTURER**	**MODEL/SERIES**	**SERIAL NUMBER**
2. **AIRCRAFT**			
3. **POWERPLANT**			
4. **PROPELLER**			

5. SPECIFIC PART *(of component)* CAUSING TROUBLE

Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.

6. APPLIANCE/COMPONENT *(Assembly that includes part)*

Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number

Part TT	Part TSO	Part Condition	7. Date Sub.

8. Comments *(Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)*

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Check a box below, if this report is related to an aircraft

☐ Accident; Date _____ ☐ Incident; Date _____

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